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**DEPARTMENT OF DEFENSE AUTHORIZATION FOR
APPROPRIATIONS FOR FISCAL YEAR 1983**

HEARINGS
BEFORE THE
COMMITTEE ON ARMED SERVICES
UNITED STATES SENATE
NINETY-SEVENTH CONGRESS

SECOND SESSION

ON

S. 2248

AUTHORIZING APPROPRIATIONS FOR FISCAL YEAR 1983 FOR
PROCUREMENT, FOR RESEARCH, DEVELOPMENT, TEST, AND
EVALUATION, AND FOR OPERATION AND MAINTENANCE FOR
THE ARMED FORCES, TO PRESCRIBE PERSONNEL STRENGTHS
FOR THE ARMED FORCES AND FOR CIVILIAN PERSONNEL OF
THE DEPARTMENT OF DEFENSE, AND FOR OTHER PURPOSES

PART 1

POSTURE STATEMENT

Secretary of Defense Caspar Weinberger
General David C. Jones, Chairman, Joint Chiefs of Staff

**ECONOMIES AND EFFICIENCIES IN THE
DEFENSE BUDGET**

Deputy Secretary of Defense Frank C. Carlucci III

FEBRUARY 2, 8, 1982



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ECONOMIES AND EFFICIENCIES IN THE DEFENSE BUDGET

FEBRUARY 8, 1982

Carlucci, Hon. Frank C. III, Deputy Secretary of Defense, accompanied by Hon. Jack R. Borsting, Assistant Secretary of Defense (Comptroller); Joseph H. Sherick, Assistant to the Secretary of Defense for Review and Oversight; David Chu, Director, Program Analysis and Evaluation, Office of the Secre- tary of Defense.....	529
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DEPARTMENT OF DEFENSE AUTHORIZATION FOR APPROPRIATIONS FOR FISCAL YEAR 1983

TUESDAY, FEBRUARY 2, 1982

U.S. SENATE,
COMMITTEE ON ARMED SERVICES,
Washington, D.C.

DEFENSE POSTURE

The committee met in closed session, at 10:06 a.m., pursuant to notice, Senator John Tower (chairman) presiding.

Present: Senators Tower, Thurmond, Warner, Humphrey, Jepsen, Quayle, Stennis, Jackson, Byrd of Virginia, Nunn, Exon, and Levin.

Staff present: Rhett B. Dawson, staff director and chief counsel; Francis J. Sullivan, minority staff director; James F. McGovern, general counsel; Christine E. Cowart, chief clerk; Brenda K. Hudson, assistant chief clerk; Louis W. Arny, Michael B. Donley, Robert S. Dotson, Richard D. Finn, Jr., Frank J. Gaffney, George K. Johnson, Jr., James R. Locher III, David S. Lyles, José E. Martinez, Anthony J. Principi, Patrick L. Renehan, Carl M. Smith, James C. Smith, and Kathleen Troia, professional staff members; Mark B. Robinson and Ralph O. White, Jr., research assistants; Gerald D. Strickler, printing and documents clerk; and Ann E. Sauer, special assistant.

Also present: Dennis P. Sharon, assistant to Senator Goldwater; Buzz Hefti, assistant to Senator Warner; Jim Dykstra, assistant to Senator Cohen; Jon Etherton, assistant to Senator Jepsen; Don Ingram, assistant to Senator Quayle; Frank Krebs, assistant to Senator Cannon; Gray Armistead, assistant to Senator Byrd; Arnold Punaro, assistant to Senator Nunn; Greg Pallas, assistant to Senator Exon; Peter D. Lennon, assistant to Senator Levin; Willis Smith, assistant to Senator Jackson; and Paul Schreiber, assistant to Senator Denton.

[The bill S. 2248 follows:]

(S. 2248, 97TH CONGRESS, 2D SESSION)

A BILL to authorize appropriations for fiscal year 1983 for procurement, for research, development, test, and evaluation, and for operation and maintenance for the Armed Forces, to prescribe personnel strengths for the Armed Forces and for civilian personnel of the Department of Defense, and for other purposes

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Department of Defense Authorization Act, 1983".

TITLE I—PROCUREMENT

AUTHORIZATION OF APPROPRIATIONS

SEC. 101. Funds are hereby authorized to be appropriated for fiscal year 1983 for the use of the Armed Forces of the United States for procurement in amounts as follows:

Army

For the Army: Aircraft, \$2,745,914,000; missiles, \$2,846,600,000; weapons and tracked combat vehicles, \$5,030,685,000; ammunition, \$2,633,384,000; other procurement, \$4,567,491,000.

Navy

For the Navy: Aircraft (including aircraft for the Marine Corps), \$11,582,300,000; weapons (including missiles and torpedoes), \$3,901,600,000; naval vessels, \$18,648,300,000; other procurement, \$3,970,156,000.

Marine Corps

For the Marine Corps: Procurement (including missiles, tracked combat vehicles, and other weapons), \$2,300,700,000.

Air Force

For the Air Force: Aircraft, \$17,756,700,000 of which \$186,100,000 is for the United States contribution of its fiscal year 1983 share of the cost of the acquisition by the North Atlantic Treaty Organization of the Airborne Early Warning and Control System; missiles, \$6,827,900,000; other procurement, \$5,845,200,000.

Defense Agencies

For the Defense Agencies: For procurement, \$890,284,000.

CERTAIN AUTHORITY PROVIDED SECRETARY OF DEFENSE IN CONNECTION WITH THE NATO AIRBORNE WARNING AND CONTROL SYSTEM (AWACS) PROGRAM

SEC. 103. Section 104 of the Department of Defense Authorization Act, 1980 (Public Law 96-107, 93 Stat. 804) is amended by inserting "and thereafter" after "fiscal year 1980" in subsection 104(a) and by striking out "for fiscal year 1980" in subsection (a)(3).

TITLE II—RESEARCH, DEVELOPMENT, TEST, AND EVALUATION
AUTHORIZATION OF APPROPRIATIONS

SEC. 201. (a) Funds are hereby authorized to be appropriated for fiscal year 1983 for the use of the Armed Forces of the United States for research, development, test, and evaluation, as authorized by law, in amounts as follows:

For the Army, \$4,484,000,000.

For the Navy (including the Marine Corps), \$6,235,316,000.

For the Air Force, \$11,220,400,000.

For the Defense Agencies, \$2,320,684,000, of which \$60,000,000 is authorized for the activities of the Director of Test and Evaluation, Defense.

(b) In addition to the funds authorized to be appropriated in subsection (a), there are authorized to be appropriated for fiscal year 1983, such additional sums as may be necessary for increases in salary, pay, retirement, and other employee benefits authorized by law for civilian employees of the Department of Defense whose compensation is provided for by funds authorized to be appropriated in subsection (a).

TITLE III—OPERATION AND MAINTENANCE AUTHORIZATION OF
APPROPRIATIONS

SEC. 301. (a) Funds are hereby authorized to be appropriated for fiscal year 1983 for the use of the Armed Forces of the United States (other than the Coast Guard) and other activities and agencies of the Department of Defense for operation and maintenance, in the amount of \$69,391,700,000.

(b) In addition to the funds authorized to be appropriated in subsection (a), there are authorized to be appropriated for fiscal year 1983 such additional sums as may

be necessary (1) for increases in salary, pay, retirement, and other employee benefits authorized by law for civilian employees of the Department of Defense whose compensation is provided for by sums authorized to be appropriated in subsection (a), and (2) for unbudgeted increases in fuel costs and for increases as a result of inflation in the cost of activities authorized by subsection (a).

TITLE IV—ACTIVE FORCES

AUTHORIZATION OF END STRENGTHS

SEC. 401. The Armed Forces are authorized strengths for active duty personnel as of September 30, 1983, as follows:

- (1) The Army, 783,800.
- (2) The Navy, 569,200.
- (3) The Marine Corps, 194,600.
- (4) The Air Force, 600,000.

SEC. 402. (a) Section 138(c)(1) of title 10, United States Code, is amended by inserting the following new sentence after the first sentence: "Such authorized end strength of any component of the armed forces may be increased by not more than 1.5 per centum in any fiscal year if the Secretary of Defense determines that such increase is needed to maintain a stable personnel force."

(b) The amendment made by this section shall apply with respect to end strengths of active duty personnel authorized for fiscal year beginning on or after October 1, 1981.

TITLE V—RESERVE FORCES

AUTHORIZATION OF AVERAGE STRENGTHS

SEC. 501. (a) For fiscal year 1983 the Selected Reserve of the Reserve components of the Armed Forces shall be programed to attain average strengths or not less than the following:

- (1) The Army National Guard of the United States, 407,400.
- (2) The Army Reserve, 258,700.
- (3) The Naval Reserve, 105,500.
- (4) The Marine Corps Reserve, 38,300.
- (5) The Air National Guard of the United States, 101,100.
- (6) The Air Force Reserve, 66,000.
- (7) The Coast Guard Reserve, 10,700.

(b) The average strength prescribed by subsection (a) for the Selected Reserve of any Reserve component shall be proportionately reduced by (1) the total authorized strength of units organized to serve as units of the Selected Reserve of such component which are on active duty (other than for training) at any time during the fiscal year, and (2) the total number of individual members not in units organized to serve as units of the Selected Reserve of such component who are on active duty (other than for training or for unsatisfactory participation in training) without their consent at any time during the fiscal year. Whenever such units or such individual members are released from active duty during any fiscal year, the average strength prescribed for such fiscal year, for the Selected Reserve of such Reserve component shall be proportionately increased by the total authorized strength of such units and by the total number of individual members.

AUTHORIZATION OF END STRENGTHS FOR RESERVES ON ACTIVE DUTY IN SUPPORT OF THE RESERVES

SEC. 502. Within the average strengths prescribed in section 501, the Reserve components of the Armed Forces are authorized, as of September 30, 1983, the following number of Reserves to be serving on full-time active duty for the purpose of organizing, administering, recruiting, instructing, or training the Reserve components:

- (1) The Army National Guard of the United States, 14,419.
- (2) The Army Reserve, 8,251.
- (3) The Naval Reserve, 12,038.
- (4) The Marine Corps Reserve, 678.
- (5) The Air National Guard of the United States, 5,158.
- (6) The Air Force Reserve, 479.

(b) Upon a determination by the Secretary of Defense that such action is in the national interest, the end strengths prescribed by subsection (a) may be increased by

a total of not more than the number equal to 2 per centum of the total end strengths prescribed.

INCREASE IN NUMBER OF CERTAIN PERSONNEL AUTHORIZED TO BE ON ACTIVE DUTY IN
SUPPORT OF THE RESERVE COMPONENTS

SEC. 503. Section 517 of title 10, United States Code, is amended—

(1) by striking out the table in subsection (b) and inserting in lieu thereof the following:

"Grade	Army	Navy	Air Force	Marine Corps
E-9.....	265	156	132	6
E-8.....	1,244	329	441	56"

(b) The columns under the headings "Army," "Air Force", and "Marine Corps" in the table contained in section 524(a) of such title are amended to read as follows:

"Army	Air Force	Marine Corps
1,351	281	95
671	267	40
234	170	21"

TITLE VI—CIVILIAN PERSONNEL

AUTHORIZATION OF END STRENGTH

SEC. 601. (a) The Department of Defense is authorized a strength in civilian personnel, as of September 30, 1983, of 1,035,500.

(b) The strength for civilian personnel prescribed in subsection (a) shall be apportioned among the Department of the Army, the Department of the Navy, the Department of the Air Force, and the agencies of the Department of Defense (other than the military departments) in such numbers as the Secretary of Defense shall prescribe. The Secretary of Defense shall report to the Congress within sixty days after the date of enactment of this Act on the manner in which the initial allocation of civilian personnel is made among the military departments and the agencies of the Department of Defense (other than the military departments) and shall include the rationale for each allocation.

(c) In computing the strength for civilian personnel, there shall be included all direct-hire and indirect-hire civilian personnel employed to perform military functions administered by the Department of Defense (other than those performed by the National Security Agency) whether employed on a full-time, part-time, or intermittent basis, but excluding special employment categories for students and disadvantaged youth such as the stay-in-school campaign, the temporary summer aid program and the Federal junior fellowship program and personnel participating in the worker-trainee opportunity program. Personnel employed under a part-time career employment program established by section 3402 of title 5, United States Code, shall be counted as prescribed by section 3404 of that title. Whenever a function, power or duty, or activity is transferred or assigned to a department or agency of the Department of Defense from a department or agency outside of the Department of Defense, or from another department or agency within the Department of Defense, the civilian personnel end strength authorized for such departments or agencies of the Department of Defense affected shall be adjusted to reflect any increases or decreases in civilian personnel required as a result of such transfer or assignment.

(d) When the Secretary of Defense determines that such action is necessary in the national interest or if any conversion of commercial- and industrial-type functions from performance by Department of Defense personnel to performance by private contractors which was anticipated to be made during fiscal year 1983 in the Budget of the President submitted for such fiscal year is not determined to be appropriate for such conversion under established administrative criteria, the Secretary of Defense may authorize the employment of civilian personnel in excess of the number

authorized by subsection (a), but such additional number may not exceed 2 per centum of the total number of civilian personnel authorized for the Department of Defense by subsection (a). The Secretary of Defense shall promptly notify the Congress of any authorization to increase civilian personnel strength under this subsection.

TITLE VII—MILITARY TRAINING STUDENT LOADS

AUTHORIZATION OF TRAINING STUDENT LOADS

SEC. 701. (a) For fiscal year 1983, the components of the Armed Forces are authorized average military training student loads as follows:

- (1) The Army, 78,311.
- (2) The Navy, 66,930.
- (3) The Marine Corps, 20,435.
- (4) The Air Force, 48,769.
- (5) The Army National Guard of the United States, 18,052.
- (6) The Army Reserve, 14,579.
- (7) The Naval Reserve, 1,000.
- (8) The Marine Corps Reserve, 2,971.
- (9) The Air National Guard of the United States, 2,328.
- (10) The Air Force Reserve, 1,351.

(b) The average military student loads for the Army, the Navy, the Marine Corps, and the Air Force and the Reserve components authorized in subsection (a) for fiscal year 1983 shall be adjusted consistent with the manpower strengths authorized in titles IV, V, and VI of this Act. Such adjustment shall be apportioned among the Army, the Navy, the Marine Corps, and the Air Force and the Reserve components in such manner as the Secretary of Defense shall prescribe.

TITLE VIII—GENERAL PROVISIONS

ADMINISTRATION OF SCHOOLS ON MILITARY INSTALLATIONS BY SECRETARY OF DEFENSE

SEC. 801. Notwithstanding the provisions of section 505(c) of the Omnibus Budget Reconciliation Act of 1981, funds authorized to be appropriated by this Act that may be available for payments and arrangements authorized by section 505(c) shall be administered by the Secretary of Defense who shall be responsible for the conduct of programs with such funds and who shall not delegate such responsibility outside of the Department of Defense.

REPEAL OF REQUIREMENT FOR REDUCTION IN NUMBER OF SENIOR MILITARY PERSONNEL OF THE DEPARTMENT OF DEFENSE

SEC. 802. Section 811 of the Department of Defense Appropriation Authorization Act, 1978, as amended (10 U.S.C. 131 note), is amended by repealing subsection (a).

INCREASE IN DOLLAR AMOUNT FOR REPORTS TO CONGRESS ON SALE OR TRANSFER OF DEFENSE ARTICLES

SEC. 803. Section 813 of the Department of Defense Appropriation Authorization Act, 1976 (10 U.S.C. 133 note), is amended by striking out "\$25,000,000" and inserting "\$50,000,000" in lieu thereof.

MODIFICATION OF REPORTS ON CONVERSION OF PERFORMANCE OF COMMERCIAL AND INDUSTRIAL TYPE FUNCTIONS FROM DEPARTMENT OF DEFENSE PERSONNEL TO PRIVATE CONTRACTORS

SEC. 804. (a) Section 502 of the Department of Defense Authorization Act, 1981 (10 U.S.C. 2304 note) is amended—

(1) by striking out "Department of Defense personnel" each time that it appears and inserting in place thereof "Department of Defense civilian personnel";

(2) by inserting the following new subsections in such section:

"(d) Except for the provisions of subsection (a)(1), the preceding subsections shall not apply to a commercial or industrial type function of the Department of Defense that is being performed by less than 50 Department of Defense civilian personnel.

"(e) The provisions of this section shall not apply during war or a period of national emergency declared by the President or the Congress;" and

(3) by redesignating subsection (d) as subsection (f).

(b) The amendments made by this section become effective on October 1, 1982.
 SEC. 805. Section 138(g) of title 10, United States Code, is amended by inserting after "fiscal year 1983" the words "and may not exceed \$900,000,000 in fiscal year 1984".

OPENING STATEMENT BY SENATOR JOHN TOWER, CHAIRMAN

Chairman TOWER. The committee will come to order.

The committee meets this morning to receive advance testimony from the Secretary of Defense and the Chairman, Joint Chiefs of Staff, concerning the content of the fiscal year 1983 defense budget.

This hearing sets two important precedents which bear heavily on our responsibilities as a committee. First, we are receiving a briefing on the fiscal year 1983 budget prior to its official release on February 8. Due to a conflict in scheduling later this month, Secretary Weinberger has been granted a special dispensation by the President to present the budget early.

Second, because this hearing comes before February 8, it must remain closed. While it has been our custom to invite the media to the committee's opening hearings, all the information presented in today's hearing must remain embargoed until February 8. The written material presented must not leave this hearing room and should be returned to the chief clerk, Miss Cowart, at the close of the hearing or any time you leave the room.

I cannot emphasize enough the responsibility being placed upon our members and staff to insure that no leaks result from this hearing. We are all aware of the new administration policies aimed at greater discipline and control over classified information. In my view, the committee must bear its share of the burden in this effort. Particularly through the balance of this week, our reputation as a committee is on the line.

I want to assure my colleagues that we will have the opportunity to discuss the budget in open session when Deputy Secretary Carlucci appears next Monday.

I know this is an unusual situation, gentlemen. I also note that there are those in the administration who would have preferred that Secretary Weinberger not appear before us today and give us this advance testimony. In fact, the Secretary wanted to, and the President wanted to, and that, in the final analysis, was the most important thing.

I personally spoke to the President and made representations to him to the effect that we wanted to get off to an early start. Therefore, he would appreciate this opportunity, even though the material is to be embargoed. I trust that all members of the committee will honor this embargo. I enjoin all members of the staff to honor it.

Senator Stennis?

Senator STENNIS. Mr. Chairman, I second what you say. I know time is precious here. I want to start early on the authorization and appropriations bills, and I point the way to get it passed is not to put in a continuing resolution. I am going to try to help it travel on its own merits so that its place in our committee be preserved. This hearing is fine.

Chairman TOWER. Secretary Weinberger, we are delighted to have you back with us. We look forward to getting off to a good

start in this congressional year. We look forward to other appearances before the committee.

General Jones, we are delighted to have you today. The way we will proceed is that the Secretary will present his statement and General Jones will make a statement, then we will go to questions.

It is my understanding that both gentlemen intend to make their statements relatively brief, so that we can give most of our time to the question-and-answer period.

Secretary Weinberger?

STATEMENT OF HON. CASPAR W. WEINBERGER, SECRETARY OF DEFENSE

Secretary WEINBERGER. Thank you very much, Mr. Chairman and members of the committee.

We do appreciate this unusual session. I am delighted that we were able to arrange to be with you because of the different travel schedules and the fact that the budget was actually scheduled for release yesterday, but slipped a week. That pushed it into travel schedules that I know made it impossible to change. So, we are glad that we were able to work this arrangement out.

I am going, Mr. Chairman, to go through, briefly, portions of this statement. I will ask that it all be placed in the record; then, of course, when the embargo is lifted, I assume it can be part of the public record.

Chairman TOWER. All unclassified material will be made a part of the hearing record.

[For the report of Secretary of Defense Caspar W. Weinberger to the Congress on the fiscal year 1983 budget, fiscal year 1984 authorization request and fiscal year 1983-87 defense programs, as of January 31, 1982, see p. 116.]

Secretary WEINBERGER. I am going to talk about three fundamental requirements:

First, I want to mention briefly the changes in defense policy that we have instituted. I don't want to spend too much time on that.

Second, I want to address the level of defense spending that our security requires and how we apportion these resources.

Third, I want to inform the committee if I can about our efforts to obtain the very best value for every defense dollar we spend through management improvement, savings and eliminating waste.

I agree with Senator Stennis, it is going to be a very important part of the whole presentation during the course of the year, so we do want to emphasize it because it is one of the things that we consider most seriously in the Department.

DEFENSE POLICY

First, briefly, on defense policy. Our policy, I think, is best described or defined as the means to the ends, the means that we can use within the resources that we have available, that the Congress makes available, to secure the ends; and, of course, that is to deter war. That is the ultimate goal toward which we are all working.

As the level of resources we devoted to defense became inadequate, so was our intellectual approach taken over by events. Our

defense policy was not only obsolete because of new threats to security, but also it has been, in a sense, discredited by its failure to recognize and cope with the deterioration in the global military situation as far as we are concerned.

The adoption of new ideas, reforming defense policy, all of that, are certainly something we want very much to do. Reform cannot be—and I think most of the people who have been talking about reforms in a general way do not advocate that reform be—a substitute for unfortunately vastly increased defense efforts in spending, which is essential in view of both the nature of the threat and the fact that we have not kept up with it in the past decade.

Part of the need for reform in strategic thinking is precisely the realization that we do have to devote more resources to defense and, if we are not to be inflationary, this has to come from reductions in other total government spending. It is a very difficult policy, but a policy, I think which is essential that we continue to pursue. We remain committed to defensive use of military strength. Our objective remains to deter aggression and respond to it if deterrence fails, and not to initiate warfare.

It has been fundamental and part of our strategy for a long time and will continue to be. We have to face realistically the implications of this stand and that is, that since we will not strike first, we have to be prepared to react after the enemy has seized the first initiative and react so strongly that counterattacks of ours will inflict a high cost on the enemy.

We have to do three things right away, and I mentioned them generally in the confirmation hearings a year ago and in later testimony throughout the year.

DEFENSE PRODUCTION

We have to make more realistic the manner in which our forces respond to warning. We have to increase substantially our readiness, our ability to utilize the forces that we have, and we have to enhance our preparations for mobilization. We need to repair the national capacity to expand defense production as well as bringing our own forces into action rapidly should we have to do so.

We need, of course, all the warning we can get, all of the unambiguous warning, and we need also to be sure that we get the warning in time, that we make the decision to respond, and that we have the means to respond. Our forces must be prepared to respond. Sometimes the warnings indicated are highly ambiguous. We have had some of those during the course of the year. The planning for that kind of response can be done at comparatively small cost.

I have initiated special efforts in NATO to speed up the planning for ambiguous warnings. It is one of the few things about which there is general and immediate agreement. Planning is cost free but the backup is not. Timely and energetic response to warning will not help us much unless our military forces are continuously maintained in a high state of readiness. That is why it has such an enormously important priority in the work we are trying to do.

The prolonged stringency in our defense budget in the past has led to underfunding in the things that determine readiness of our

Armed Forces. Adequate manning, training, maintenance, supplies, spare parts, fuel, ammunition—all of these rather unglamorous and vital things—have been underfunded and the efforts for improved readiness and sustainability are necessary to enable us to respond to attack or ambiguous threat of attack. That is stressed because of the high importance, and high priority, we attach to them.

READINESS

As the Secretary of Defense, I can't confine my attention to the long-term recovery of our military strength, even though that is an enormously important part of it. We have to be able to respond to things that might occur right now, and that crisis may come at any time. Therefore, improvements in readiness are essential for a defensive strategy, having both the advantage and the imperative. These improvements in readiness also will be realized very soon.

This has inspired some of our decisions on activation and reactivation of weapon systems. Reactivation of battleships, with updated electronics and so on, is a controversial matter, but we urge your approval along with employment of cruise missiles on attack submarines. These are quick ways to get more naval power at sea at far less cost than building new ships.

Preparation of large-scale military mobilization must complement our improved readiness. We would be complacent to assume we can readily call on American industry today to accomplish rapid expansion in defense production, so we have taken various steps to try to improve that.

Improvement in the acquisition process and multiyear procurement will help strengthen industry and give them more confidence in our long-term willingness to make the effort and sacrifice that is required in regaining our military strength.

We need steady acquisition programs. We cannot look at these problems in 1 year slices or between rather narrow, 12-month boundaries. To get the best value in terms of both cost and surge capability, we need steady acquisition programs in which everyone can have confidence that they will continue regardless of what other events may be taking place.

Another thing in defense policy is the increased recognition that our conventional forces must be designed for a wider range of contingencies. It is our aim to direct the improvement of our forces so as to create a better balance in meeting various threats. For many years it has been our policy to let investment and planning for conventional forces be determined primarily by requirements for fighting a war centered in Europe without weakening our resolve.

We must recognize that in recent years the Soviet Union has been increasing its ability to exploit instability and project military power in many other areas such as Persian Gulf and the Caribbean. For the Persian Gulf region our strategy is based on the prospect of using U.S. forces, against other forces with far greater economic strength than we have in reserve, to insure continued access to the oilfields. This coupled with the prospect of our carrying the war to other areas, is the most effective deterrent.

First, we have to have the capability to deploy enormous forces to hold and interdict and blunt the Soviet attack. That is, of course, the basis for the proposal to improve the Rapid Deployment Force that we make in this budget. Second, the strategy recognizes that we should have options for fighting on other fronts.

Our growing maritime capability will serve these options.

Third, we must recognize the complementary development of allied and friendly forces and facilities.

If we are alone, we will deal with the Soviet threat at very much greater cost. Our security assistance to many of these countries is much smaller today than in the past, yet it is more important to the United States today.

The President has sought to strengthen our security assistance to allied and friendly nations. Some of these we will be discussing tomorrow when President Mubarak is here.

Some of the essential forces and facilities are owned by our own allies and by friends who cannot fund the desired force improvements on their own. I know Secretary Haig and I can count on support of members of this committee for our security assistance program because it is such a vital part of our whole defense posture.

The fallacy, we believe, in recent defense policy regarding conventional warfare has been the short war assumption, the idea that in planning strategy we can rely on the fact that conventional war will be of short duration. Unfortunately, commonsense and past experience tell us otherwise.

We have instituted changes to correct this fallacy. We believe deterrence would be weakened if the enemy were misled to believe that he could outlast us in conventional war. We have tried to improve our stability and strengthen our capability for defense production and, of course, we have concentrated additional efforts on trying to improve our whole conventional war capability.

The nuclear strategy I have left until this point, because while we do not regard nuclear strength as a substitute for conventional strength, and we do not seek nuclear superiority for the United States, we will make every necessary effort to prevent the Soviet Union from acquiring a superiority that they might mistakenly and tragically feel leads them to believe that a first strike of theirs could ever succeed.

We spend about 85 percent of our total budget on nonnuclear forces and that accurately reflects our priorities. This administration must cope with the severe inadequacies it inherited in the realm of strategic and theater nuclear capabilities. We are faced with the necessity of modernizing and strengthening all three parts of the Triad at once, and that has begun.

We had full briefings last fall on the President's program for modernization of nuclear forces. It is not only proceeding as planned but also we are actually exploring the possibility for accelerating delivery time of some of the most important strategic weapon systems. Nevertheless, we will stay within the roughly 14 percent of the total resources during the coming 6 years that will be necessary to put the new strategic nuclear force in place.

President Reagan's strategic force modernization program takes a long-term view and it is essential because these arms take such a long time to acquire and are part of our forces for many years.

We also have to take a longer term view of our overall military competition with the Soviet Union.

President Reagan's initiatives on transfer of technology and East-West trade and on terrorist or Soviet penetration in Africa and South America are part of the larger strategy, and so are his initiatives on arms control. We don't expect quick results but we know if we have the support of the Congress we can strengthen defense and improve other instruments: The long-term prospects I feel confident are bright.

SOVIET THREAT

Now, Mr. Chairman, very briefly on the specific budgetary questions, our budget must take account of the nature and size of the Soviet threat. We recognize full well that there are other threats, but only the Soviet Union has the power to inflict millions of casualties on our population. Only the Soviet Union has massive and modern conventional and nuclear forces deployed directly confronting our friends and allies in Europe and Asia and, of course, ourselves, with their intercontinental weapons. Only the Soviet Union has the forces and the geographic proximity to threaten the free world source of oil, and it is quite clear they are embarked on a sustained effort to supply arms to totalitarian forces in various parts of the world. They are willing to use their force directly, as in Afghanistan, or to intimidate and coerce from the outside, as in the case of Poland or to use client states, as in the case of the Caribbean.

Measured by that threat, we believe our proposed defense budget is fully justified and by no means extravagant, since the projected real growth of Soviet military investment is likely to exceed ours for many years to come. If we cut back our defense budget after only one year spent in regaining our strength, that gap will widen, resulting in intolerable deterioration of our security. It would also send all of the wrong signals all around the world to our friends as well as our adversaries.

If Congress approves our defense budget, I believe the danger to our security can indeed be brought under control.

We are requesting \$258 billion in total obligational authority for fiscal year 1983. We estimate that will result in outlays of \$215.9 billion if we actually achieve all the savings that we plan.

Our decision to fund fully the weapon systems that we are proposing, especially two additional aircraft carriers, and our decision to fund fully our multiyear procurement, accounts for the very large TOA and for 20 percent of the increase over the 1982 budget. If Congress approves the fiscal year 1983 request, we anticipate a lower rate of growth of total obligational authority for fiscal 1984.

IMPROVING OUR READINESS

In designing the 1983 budget we gave first priority, for these reasons I mentioned, to improving readiness of our forces. Flying hours of the Air Force pilots, which dipped as low as 13 hours a month in 1978, will again be increased, rising to 17 per month in 1982 and to 18.5 per month in 1983.

SUSTAINABILITY OF OUR FORCES

Our next priority is to improve sustainability of our forces, at the moment, some of our forward-deployed units have only a week's supply of key munitions over that provided in 1981 and 1982 and approved by the Congress. This situation will soon begin to improve, but our efforts must continue in 1983 and beyond.

Apart from the crucial program for the modernization of strategic nuclear forces, the most significant force expansion centers on the Navy, particularly those components that have offensive missions. By the end of fiscal 1982 our battle force will total 514 ships; 475 of those are general-purpose ships. By the end of this decade the deployable battle force will exceed 600 ships.

For fiscal 1983 our request includes 18 new ships, 6 conversions and 1 acquisition. The 5-year plan totals 133 new construction ships, 10 conversions and 6 acquisitions.

Our objective for mobility over the next 5 years is to develop the capability to deploy the Rapid Deployment Force to Southwest Asia or indeed to other areas in 4 to 6 weeks, and subsequently to reinforce NATO with 6 Army divisions to bring up to strength of 10 divisions, 60 Air Force tactical fighter squadrons in 10 days.

Our program to do this contains additions to each component of airlift, prepositioning, and sealift.

After careful consideration of all the alternatives, Mr. Chairman, and this is one of the things we spent a great deal of time on this fall, we have decided to procure 50 new C-5 aircraft to be supplied by Lockheed on a fixed-price contract, and contract for 44 additional McDonnell Douglas KC-10 cargo tanker aircraft. We chose those because we needed to increase capability as rapidly as possible. This is the alternative that does this in the most effective way.

The C-5's and KC-10's are available at favorable, comparative prices, even to the C-17. The new C-5 is the result of lessons learned from the old C-5A's. The KC-10 can be used as a tanker or cargo aircraft. We will restructure the Civil Reserve Air Fleet enhancement program.

To complement this airlift in meeting early deployment objectives, we are continuing plans to preposition six Army division sets of equipment, one set for the brigade-sized Marine Force and to preposition selected items of Air Force equipment at bases in Europe and Southwest Asia.

We will also continue programs to store war reserves of material for our forces in Europe and Southwest Asia and in the Western Pacific.

To meet subsequent objectives that cannot be met sooner by ships in the commercial fleet, we plan to strengthen the Department's surge sealift capability and are requesting funds for this purpose to complete conversion of the SL-7's and to expand the Ready Reserve Fleet.

We are significantly enhancing Army and Navy capability for offloading cargo in austere or difficult ports.

We plan a fairly large growth of both Air Force and Navy tactical air forces. Fighter forces will grow from 36 notional wings at the end of 1982 to 40 wings at the end of 1985, 26 Active and 14 Reserve.

INCREASE NAVY CARRIER WINGS

At the same time we plan to increase our Navy active carrier wings from 12 to 14 by the end of 1987.

Our emphasis in developing more flexible and mobile forces does not mean we are neglecting our ground forces. We will maintain an overall U.S. ground force structure of 28 divisions, 16 Active and 8 Reserve Army divisions, and 3 Active and 1 Reserve Marine divisions.

We plan to make major progress in modernization. We hope to procure 776 of the new M-1 tanks in fiscal 1983, increasing the production rate from 30 to 60, and then going on up to 90 by mid-1985. A lot of that, I think, will depend on the successor to the Chrysler tank plant, now under negotiation.

We will also buy 600 of the Bradley fighting vehicles and 258 light armored vehicles.

I would like to close, Mr. Chairman, with just a word, again as I mentioned at the beginning, about the deep awareness we have of the compelling need to manage our resources with the maximum of efficiency.

We have instituted programs, which received first priority and precedence, in order to cut out all waste, find savings and eliminate any sort of mismanagement.

Deputy Secretary Carlucci, who has been the spearhead in this area, has done a magnificent job, his usual magnificent job. He will testify next week in greater detail on this vital program after the budget has been formally released and when I will be away.

Our current funding policies result in specific 5-year savings in economies and budget authority of \$41.4 billion when compared with the funding which has been required to follow the previous administration's policy.

In fiscal year 1987, if that year is included, the figure grows to \$51.5 billion. We will be looking for even larger savings in the years to come.

Fiscal year 1983 defense outlays have already been reduced by more than \$5 billion, based on new economies and efficiencies.

Constraints on effective further savings must be properly understood. Ninety-three cents of every defense outlay dollar is committed at the beginning of the year to cover prior-year programs for just the minimal operations of the Department.

This leaves 7 cents of each defense outlay dollar for spending for new programs.

Short-run outlay cuts in the budget imperil long-term goals. Because of defense spend-out patterns, to get \$1 billion in outlay reductions requires program authority almost four times as large. This can cause disruption and reflects on the readiness function. When we hear a lot of very casual, and I have to say quite uninformed, talk about how we can cut another \$10 billion in outlays without hurting defense, I have to say that simply demonstrates the lack of familiarity of the speaker.

The task before us really is too big and must be done much too quickly for any one country. We have one of our greatest tasks and challenges to integrate our plans and policies more completely with

our allies for a common defense strong enough to insure freedom to all.

We must not do anything less than our fair share because some of our allies may not seem to do so. Nor should we abandon our effort to convince them that they should all do their fair share; nor should we abandon them.

I will sum up by saying we have to do two major things:

We have to bring to a halt further expansion and consolidation of the Soviet military empire, even though that expansion proceeds through indirect rather than direct military intervention; and our strategy must see to it that the productivity and the technological creativity of a free society are not exploited or handed over to the Soviets in order to make good the chronic deficiencies of their system under the false banner of trade.

Military strategy must be the servant of national policy, the policy that is the ultimate trustee of the Nation's interests.

It would not be fair, nor would I want to conclude without expressing the very deep appreciation I feel for the members of this committee who have unstintingly supported the Defense Department in the past year and in the face sometimes of very difficult countervailing positions. I appreciate very much this opportunity for the hearing, Mr. Chairman.

General Jones has a brief statement, I understand, that he would like to make.

Chairman TOWER. Thank you, Mr. Secretary.

Before turning to General Jones, several have come into the room since my opening statement. I want to remind you that this hearing is embargoed until February 8. That is why it is a closed hearing.

Secretary Weinberger was given special permission to appear several days before the official presentation of the budget, hence a closed hearing and an embargoed hearing. So, the written material that is presented to you should not leave the hearing room and should be returned to the chief clerk, Miss Cowart, at the close of the hearing or any time you leave the hearing room.

I emphasize that.

Senator JACKSON. Why isn't it classified?

Chairman TOWER. It is embargoed rather than classified because a lot of the material does not fall under the classification criteria. In fact, we had to do a little moving down at 1600 Pennsylvania Avenue to get the Secretary up here this early, anyway, in order to get an early start. There will be an open hearing when the budget is presented, and Mr. Carlucci will appear then. Obviously, then there will be opportunity for comment in open hearing.

Senator JACKSON. Can we ask questions? Everyone in the room is cleared.

Chairman TOWER. Yes, we can follow our usual procedure on questions. This record will be made public in due course.

[The prepared statement of Secretary Weinberger follows:]

PREPARED STATEMENT OF CASPAR W. WEINBERGER, SECRETARY OF DEFENSE

Mr. Chairman, members of the committee, fifteen months ago the American people gave Ronald Reagan the mandate to lead our Nation. That mandate emphasized the immediate need to strengthen America. It is the President's responsibility,

while working ceaselessly for peace, to ensure that the safety of the American people cannot successfully be threatened by anyone. President Reagan has kept his pledge to make this responsibility his first priority, and we are well launched on this gigantic task.

My primary statutory responsibility is to advise the President and the Congress of the things we must do to improve our national defense, and why we must do them. Serious deficiencies in our military forces have compelled us to develop new programs and to ask you for an increase in the defense budget. The major weaknesses in our defenses that have resulted from over a decade of neglect must be corrected. At the same time we must look at the decade to come. With your cooperation we will construct a defense that can substantially reduce the serious dangers our Nation now faces.

In these opening remarks, I shall address three fundamental requirements of our defense effort:

First, I want to tell you briefly about the changes in defense policy that I have instituted.

Second, we have to address the level of defense spending that our security requires and how we apportion these resources among the many competing priorities.

Third, I want to inform you about our efforts to obtain the very best value for every defense dollar spent—through management improvements, savings, and by eliminating waste.

First, on our defense policy: Policy relates means to ends; it endows all our efforts with a coherence of purpose and a sense of direction.

Just as the level of resources that we devote to defense has become inadequate, so has our intellectual approach been overtaken by events. Indeed, our former defense policy has not only become obsolete because of new threats to our security, but it has also been discredited by its failure to recognize and cope with the deterioration in the global military situation. In fact, obsolete strategic concepts have stood in the way of necessary reforms. Hence, we have to break with past thinking and develop new policy and concepts.

But let me add a cautionary note here. Even though it is essential that we reform our defense policy, this reform cannot be a substitute for a vastly increased defense effort. The adoption of new ideas and thinking is sometimes presented as an alternative to sustained growth in the defense budget. It is not. Part of the needed reform in strategic thinking is precisely the new realization that we must devote more resources to defense.

In stressing the importance of change, I do not wish to belittle the substantial continuities in our policy. The United States remains committed to a defensive use of military strength; our objective is to deter aggression or to respond to it should deterrence fail, not to initiate warfare. This stance has been fundamental to U.S. national strategy for a long time. But what is new in our defense policy is that we now realistically face the implications of this defensive stance. Since the United States will not strike first, our military forces must be prepared to react after the enemy has seized the first initiative, and to react so strongly that our counterattacks will inflict unacceptably high cost on the enemy, and thus deter their initial strike.

Three tasks, I decided, had to be undertaken at once with a high sense of urgency. First, we needed to make more realistic the manner in which our forces respond to warning. Second, we had to increase substantially programs to improve the steady state of readiness of our forces. Third, we had to enhance our preparations for military mobilization (the arrangements to mobilize, assemble, and deploy our forces)—and we need to repair the national capacity to expand defense production rapidly during a crisis.

Our forces will, of course, be better able to cope with an armed attack if we alert them in response to warning and bring them to a higher state of readiness. Indeed, major aspects of our planning—such as the NATO reinforcement plan—are based precisely on the assumption that we can exploit warning of an enemy attack. To carry out a timely response to warning, however, two conditions must be met: we must not only receive warning, but also take the decision to respond. The first task has long been recognized; it calls for strong intelligence capabilities. We have taken steps to improve these capabilities. It is the second task that has been neglected. We cannot assume that the enemy will necessarily do us the favor of furnishing warning that is unambiguous. Military history reminds us that we ought to expect a massive and skillful effort at deception. It is sobering to recall how often extensive intelligence warnings failed to trigger the decision actually to prepare against attack.

Our forces must be prepared to respond to warning indicators that are highly ambiguous. Military planning for such a response is a measure we can take quickly

and—an added attraction—at a very small budgetary cost. I have initiated a special effort in NATO to advance the planning for ambiguous warning.

Yet, while the planning is essentially cost free, the necessary backup is not. The most timely and energetic response to warning will not help us much unless our military forces are continuously maintained at a high state of readiness. The prolonged stringency in our Defense Budget has led to an underfunding of the very things that determine the readiness of our Armed Forces—adequate manning and training, maintenance, supplies of spare parts, fuel, and ammunition. The efforts for improved readiness and sustainability, thus, are necessary to enable us to respond to an attack, or to respond to an ambiguous threat of attack. I am stressing this point so much, Mr. Chairman, to convey to this Committee the fact that improved readiness and sustainability are vital.

As Secretary of Defense, I cannot confine my attention to the long-term recovery of our military strength—important as the sustained effort to build up our forces is, and as long as it takes to reacquire the relative strength we once had. I am responsible to the President and to the nation for our security here and now, for a crisis that might come tomorrow. Improvements in readiness—apart from being essential for a strategy that is defensive—have both the advantage and the imperative that they be realized soon. This need for quick improvement also inspired some of our decisions on the acquisition and reactivation of weapon systems. For example, the reactivated *Iowa*-class battleships, equipped with modern cruise missiles and electronics, and the deployment of cruise missiles on attack submarines, are quick ways to get more naval power to sea, at far less cost than building new ships of comparable power.

Preparations for large-scale military mobilization must complement our improved readiness and our preparations to respond to warning. Our existing military assets—personnel, arms, and supplies—may have to be assembled and deployed rapidly to the arena of conflict. What is needed here are exercises and up-to-date planning—low-cost measures that can go a long way to strengthen the deterrent effect of our forces.

Distinct from these preparations for military mobilization are the efforts I initiated to repair our capacity rapidly to expand defense production. Our historic experience suggests that a crisis threatening our national security is likely to lead to a decision massively to expand our defense effort. For example, upon the outbreak of the Korean War, Congress decided on a threefold increase in our defense budget. But we would be complacent to assume that we could readily call on American industry today to accomplish comparable feats in expanding defense production.

The improvements in the acquisition process that we instituted last year, in particular the multi-year procurement, will help strengthen our defense industry. We must induce defense contractors and subcontractors to invest in production facilities, otherwise we will not benefit from the deterrent effect of our industrial potential. Hence, we should not look at defense contracting in one-year slices. To get the best value, both in terms of program cost and surge capability, we need steady acquisition programs.

Another change in defense policy is the increased recognition that our conventional forces must be designed for a wider range of contingencies. It is my aim to direct the improvement of our forces so as to create a better balance in meeting the different threats. For many years, it has been U.S. policy to let the investment and planning for our conventional forces be determined primarily by the requirement for fighting a war centered in Europe.

Without in any way weakening our resolve to retain our strength for that purpose, we must recognize that in recent years the Soviet Union has been greatly increasing its ability to exploit political instability, and to project military power into other vital areas, such as the Persian Gulf and the Caribbean.

For the region of the Persian Gulf, in particular, our strategy is based on the concept that the prospect of combat with U.S. forces, plus those of other countries with a far greater economic stake than we in preserving access to the oilfields, coupled with the prospect that we might carry the war to other arenas, is the most effective deterrent to Soviet aggression. This strategy, thus, has two dimensions. First, we must have a capability rapidly to deploy enough force to hold key positions, and we must be able to interdict and blunt a Soviet attack. Hence, we will propose to you improvements in the Rapid Deployment Force and in related mobility. Second, this strategy recognizes that we should have options for fighting on other fronts. Our growing maritime capabilities will serve these options.

Third, we must recognize that without the complementary development of allied and friendly forces and facilities, we could deal with the new Soviet threats, if at all, only at much greater cost. Our security assistance to many of these countries is

much smaller today than in the past; yet it is more important because U.S. interests are threatened now in more places. The President, accordingly, has sought to strengthen our security assistance to allied and friendly nations. Such assistance will enhance both the complementary roles of U.S. and friendly forces, and the availability of overseas facilities. Some of the essential forces and facilities are owned by our allies and friends who cannot fund the desired force improvements on their own. I know Secretary Haig and I can count on the support of members of this committee for our security assistance programs.

A fallacy in recent defense policy regarding conventional warfare has been the "short war" assumption—the notion that in planning our strategy and designing our forces we could rely on the assumption that a conventional war would be of short duration. Common sense and past experience tell us otherwise. I have therefore instituted changes to correct this fallacy. It goes without saying that, should deterrence fail and a conventional conflict be forced upon us, we would bend every effort to win the war as quickly as possible. However, unless we are so strong, or our enemy so weak that we could quickly achieve victory, we cannot count on a war ending within a few weeks or months. And deterrence would be weakened if the enemy were misled to believe that he could easily outlast us in a conventional war.

The efforts that I have initiated to overcome the "short war" fallacy—improved sustainability for U.S. forces, and a strengthened capability to expand defense production—are essential to reduce the likelihood of war. The effort to achieve greater sustainability is a key part of the Defense Budget that I am submitting to you.

It is by intention that I have not mentioned nuclear strategy until now. This Administration does not regard nuclear strength as a substitute for conventional strength. And while we do not seek nuclear "superiority" for the United States, by the same token, we will make every necessary effort to prevent the Soviet Union from acquiring a superiority that would mistakenly and tragically lead them to believe a first strike by them could even succeed.

At present we spend some 85 percent of our total Defense Budget on non-nuclear forces, and that accurately reflects our priorities. Non-nuclear capabilities would, in fact, receive an even higher priority in our budget, had it not been for the fact that this Administration must cope with the severe inadequacies it inherited in the realm of strategic and theater nuclear weapons. As you know, we are faced by the necessity of modernizing and strengthening all three parts of the triad at once, and we have begun that awesome task.

I had briefed you last fall on President Reagan's program for the modernization of the strategic forces. I can report today that not only is it proceeding as planned, we are actually exploring possibilities for accelerating the delivery time of some of the most important strategic weapons systems.

As I stressed last fall, President Reagan's strategic force program takes a long-term view. This is essential since strategic arms take a long time to acquire and are part of our forces for many years.

But we also must take a longer-term view of our overall military competition with the Soviet Union. President Reagan's initiatives on technology transfer, on East-West trade, on terrorism and Soviet penetration into Africa and Latin America are all part of this larger strategy. So are the President's initiatives on arms controls. We don't expect quick results. But if we have the support of Congress for coherent and sustained effort to strengthen our defense and to improve other instruments of our foreign policy, the long-term prospects—I feel confident—are bright.

Let me now turn to specific budgetary questions.

The overall level of the Defense Budget must take account of the Soviet threat. We recognize full well that there are other threats. But only the Soviet Union has the power to inflict tens of millions of casualties on our population. Only the Soviet Union has massive and modern conventional and nuclear forces deployed, directly confronting our friends and allies in Europe and Asia. Only the Soviet Union has the forces and geographic proximity to threaten the free world's source of oil. And the Soviet Union is embarked on a sustained effort to encourage and arm totalitarian forces in various parts of the world, so as to expand its political influence and military reach. And, as we know, the Soviet Union is perfectly willing to use its strength directly, as in Afghanistan, or to intimidate or coerce from outside, as is the case in Poland.

Mr. Chairman, measured by the threat we confront, our proposed Defense Budget is fully justified and by no means extravagant. The grim fact is that even with the projected real growth, Soviet military investment is likely to exceed ours for many years. If we again cut back our Defense Budget, after only one year in the effort to regain our strength, this gap would widen, resulting in an intolerable deterioration in our security. If, on the other hand, Congress approves our proposed Defense

Budget, I believe, Mr. Chairman, the danger to our security can be brought under control.

We are requesting \$257.7 billion in total obligational authority for fiscal year 1983, which we estimate will result in outlays of \$215.9 billion, given the achievement of all the savings we will secure. Our decision to fund fully the weapons systems we are proposing, especially two additional aircraft carriers, and our decision to fund fully our multi-year procurements, account for the larger TOA and for 20 percent of the increase over the fiscal year 1982 budget. Thus, if the Congress approves the fiscal year 1983 request, we anticipate a lower rate of growth of total obligational authority for fiscal year 1984.

In designing the fiscal year 1983 budget, we gave first priority, for the policy reasons I mentioned, to improving the readiness of our forces. For example, flying hours for Air Force pilots, which had dipped as low as 13 hours per month in fiscal year 1978, will again be increased, rising from 17 hours per month in fiscal year 1982 to about 18 and a half hours per month in fiscal year 1983.

Our next priority is to improve sustainability of our forces. At the moment, some of our forward deployed units have only a week's supply of key munitions. Thanks to the increases provided in the 1981 and 1982 budget, this situation will soon begin to improve. But our effort must be continued in the 1983 budget and beyond, if we are to achieve the minimally necessary levels of war reserve equipment, spare parts, and munitions. If approved by the Congress, the Reagan Administration's five-year plan for fiscal year 1983-87 will fund munition inventories to support U.S. ground forces in sustained combat in Europe and Korea for 60 days, and the RDF in a Persian Gulf contingency also for 60 days.

Apart from the crucial program for the modernization of the strategic nuclear forces, the most significant force expansion I am proposing centers on the Navy, particularly those components that have offensive missions. By the end of fiscal year 1982 our deployable battle force will total 514 ships of which 475 are general purpose force ships. By the end of this decade, when most of the ships in our five-year ship-building plan will have joined the fleet, the deployable battle force will exceed 600 ships. For fiscal year 1983, our requests include 18 new ships, six conversions, and one acquisition. The five-year plan totals include 133 new construction ships, ten conversions, and six acquisitions.

Our objective for mobility programs over the next five years is to develop the capability to deploy the Rapid Deployment Joint Task Force to Southwest Asia in four to six weeks and to continue our plans to reinforce NATO with 10 Army divisions and 60 Air Force tactical fighter squadron in 10 days. Our program to do this contain additions to each component of mobility forces: airlift, prepositioning, and sea-lift.

After careful consideration of the alternatives for meeting our airlift needs, we have decided to procure 50 new C-5 aircraft to be supplied by Lockheed under a fixed price contract, and to contract for 44 additional McDonnell-Douglas KC-10 tanker/cargo aircraft. We chose this alternative because we needed to increase capability as rapidly as possible. Both C-5s and KC-10s are available, at quite favorable comparative prices, sooner than the C-17, and with minimum risk in cost, schedule, or performance. The new C-5 is the result of the lessons learned from the first C-5. The KC-10s could be used as tanker or cargo aircraft. We also plan to restructure the Civil Reserve Air Fleet (CRAF) Enhancement Program.

To complement this airlift in meeting early deployment objectives, we propose to continue plans to preposition six division sets of POMCUS in Europe, to store equipment and supplies for three brigade-sized Marine task forces aboard chartered ships in the Indian Ocean and for one such force in Norway, and to position selected items of Air Force equipment at bases in Europe and Southwest Asia. We will also continue programs to store war reserve material for all Services in both of these theaters and in the Western Pacific.

To meet subsequent objectives that cannot be met soon enough by ships from the commercial fleet, we plan to strengthen DOD's surge sealift capability. We are requesting funds to complete conversion of the remaining four SL-7s and to further expand the Ready Reserve Fleet. We are also significantly enhancing Army and Navy capabilities for offloading cargo over the shore or in austere ports.

We plan fairly large growth in both Air Force and Department of the Navy tactical air forces. Air Force fighter forces will grow from roughly 36 notional wings at the end of fiscal year 1982, to 40 wings (26 active/14 reserve) at the end of fiscal year 1985, and to 44 wings (29 active/15 reserve) by the end of the decade. At the same time we plan to increase our Navy active carrier air wings from 12 at the end of fiscal year 1982 to 14 in fiscal year 1987.

These force structure buildups will be supported by significant increases in tactical aircraft procurements over the fiscal years 1983-87 period. At the end of the funded delivery period the Air Force's fighter/attack aircraft inventory will exceed 4,800 (compared to less than 4,200 planned by the previous administration). At that time, the Department of the Navy fighter/attack inventory will exceed 1,900 aircraft.

Our emphasis on developing more flexible and mobile forces does not mean that we are neglecting our ground forces. We will maintain overall U.S. ground force structure at a total of 28 divisions: 16 active and eight reserve Army Divisions and three active and one reserve Marine Corps divisions. And we plan major progress in modernization. We will procure 776 new M-1 tanks in fiscal year 1983, increasing the production rate from 30 to 60 tanks per month by late 1982 and eventually to 90 tanks per month by 1985. We also plan to buy 525 Bradley Fighting Vehicle systems for the Army and 267 Light Armor Vehicles for both Army and Marine Corps, providing a major enhancement in the tactical mobility of our mechanized infantry forces.

Mr. Chairman, I am keenly aware of the compelling need to manage our resources with the maximum efficiency, I have instituted a program which receives first priority and precedence, to cut out all waste, to find savings, to eliminate mismanagement. Deputy Secretary Carlucci will testify next week in greater detail on this vital program.

Our current funding policies result in specific five-year savings and economies in Budget Authority of \$38.7 billion when compared with the funding which has been required to follow the previous Administration's policies. If fiscal year 1987 is included, the figure grows to \$48.2 billion and we will be looking for even larger savings in the years to come. Fiscal year 1983 Defense outlays have already been reduced by more than \$5 billion based on new economies and efficiencies.

The constraints in effecting further savings must be properly understood. About 93 cents of each Defense outlay dollar are committed at the start of the year to cover prior year programs and minimal operations of the Department. This leaves only seven cents of each Defense outlay dollar for spending for new programs. Moreover, short run outlay cuts in the Defense Budget can imperil long-term goals. Because of Defense spend-out patterns, outlay reductions require program reductions almost four times as large. This causes serious program disruption and impacts heavily on faster spending readiness functions.

The task before us is too big and must be done too quickly for any one country. This fact sets before us one of our greatest tasks and challenges: We must concert our plans and policies more completely with our allies, so that we will have a common defense strong enough to insure our freedoms at a cost tolerable to all. We must neither do less than our fair share because some of our allies may seem to do so. Nor should we abandon our efforts to convince them that we must all do our fair share, nor should we ever abandon them.

Mr. Chairman, for the natural strength of free societies to prevail in the long run, our defense strategy must do two things. First, it must bring to a halt the further expansion and consolidation of the Soviet military empire, whether this expansion would proceed through direct Soviet military intervention (as in Afghanistan) or through less direct intervention (as in Angola, Nicaragua, and elsewhere). Second, our strategy must see to it that the productivity and technological creativity of free societies are not exploited or handed over to the Soviets to make good the chronic deficiencies of the Communist system, in the name and under the false banner of Trade.

In the nuclear age, more than in any other period in human history, military strategy must be the servant of national policy, a policy that is the ultimate trustee of the nation's interests. But to paraphrase Clausewitz, policy cannot make demands on military strategy which strategy cannot fulfill. I have the responsibility as Secretary of Defense to tell you that, in my view, no defense policy, no strategy, could succeed in the long run unless we pay close attention to the foundations for military strength. We must pursue a policy that insures that our resources will not be diverted to strengthen our adversary, but instead will fully serve the cause of freedom.

Let me conclude, Mr. Chairman, by expressing my deep appreciation to you and to this Committee for the unstinting support given to the Defense Department during the past year.

Senator TOWER. General Jones?

STATEMENT OF GEN. DAVID C. JONES, USAF, CHAIRMAN, JOINT CHIEFS OF STAFF

General JONES. Mr. Chairman *and members of the committee*, I look forward to starting my eighth and last year of posture hearings. From that side of the table it may not seem a long time but from this side it certainly does.

When I finish my term this summer, I will have been a member of the Joint Chiefs longer than anybody in history. During that time period I will have worked for four Secretaries of Defense, four Presidents, worked with four Secretaries of State and now I am working with my fifth National Security Adviser.

I mention this not to point out that I am the ultimate survivor in the national security business but that it does give me a somewhat unique perspective.

I started my military career in the 1940's. I am retiring in the 1980's. I see those as the two turbulent decades. The 1950's and 1960's and 1970's—when you look back on those you will see them as relatively stable compared to the 1940's and 1980's.

There is a great deal we have to do. We need to improve our defense posture. We look forward to testifying on the budget in specifics. We need more than the defense resources; we need the proper organization within the military to develop the strategy and the planning, particularly a good war-fighting capability. In my judgment, we do not have that organization today. I have a much different perspective after nearly 4 years on the Joint Chiefs as Chairman than when I was a Service chief with a responsibility for fighting for the resources for my individual Service.

We have made progress in jointness. We have broadened our joint exercises in the last few years to include mobilization. In 1978 we ran an exercise which was the first mobilization exercise of any magnitude since World War II. We have formed the Joint Deployment Agency, where now we can integrate the efforts of the air and sealift and move the forces of the four Services fairly rapidly.

We are integrating, at the recommendation of the Joint Chiefs of Staff, the land and sea transportation organizations. We are working on better integration of command and control—we now pay more attention to the problem of command and control, but we have a long way to go.

We have formed a Rapid Deployment Joint Task Force that has had a lot of growing pains. One thing we are accomplishing in that RDJTF—which is to become a unified command—is that it is the first headquarters at the operational level that in peacetime is involved with the forces of all four Services and will fight those forces at an operational level in time of war.

A lot of the problems that have not been resolved in the past—that is the four Services not working together on a day-to-day basis—can be solved through the RDJTF. So I am glad that there are growing pains and controversy because we are addressing some issues that have not been addressed for a long time.

The military Services by tradition and heritage properly have a role in recruiting people and training them in weapon system design and acquisition, logistics and so forth. To fight, we depend on all Services and we need better integration of the efforts of all

Services so that we get a synergistic effect, the sum being greater than the individual parts.

The system we have now is remarkably resistant to change. It developed in a patchwork fashion during World War II and has had only limited changes in the 35 years since the National Security Act of 1947.

In my judgment, the system is fraught with problems. This committee fully understands that committees can serve a useful purpose—there are many advantages of operating committees. But committees are notoriously poor at trying to run things. We have some unique factors relating to committees in the Pentagon—the Joint Chiefs of Staff “Committee” and the committees that work for us—that make things even more difficult.

First, arising out of World War II was the tremendous pressure for unanimity in joint committee action. It is written in the statute that if the Joint Chiefs of Staff cannot agree unanimously on an issue, we have to pass that information on to the Secretary of Defense. Therefore, there is great pressure on trying to accommodate differing views and great reluctance on having split views in the system. We do have a split on issues from time to time.

Second, we have five layers of committees with the Service staffs involved at every level of action, each with a *de facto* veto because of the great pressure for unanimity. Understandably there is great institutional pressure on the individual Service members of these committees. This committee understands pressures and constituencies. When a constituency believes that their Service is not getting a fair share of the budget, there is great pressure on the Service members working the joint problem, including the Service chiefs.

Finally, there is also very little incentive to be in the joint business—very little preparation for service on the Joint Staff or any other joint positions, and very few rewards.

In the decades that we have had the joint system, with all the senior people assigned as Director of the Joint Staff or head of directorates such as operations or plans, there has been only one person in history—General Earle Wheeler—who ever went on to be a Service chief or Chairman after serving in one of the senior positions on the Joint Staff.

I have been a participant in, or a very close observer of, the joint system for well over 20 years. The problem is clearly not people; it is the basic system. I am advocating changes. I am not advocating a general staff. I am not advocating unification of Services to where we would all end up wearing the same uniform.

I would retain many of the strengths of having the individual services. But what I would do is strengthen the role of my successor—strengthen the role of the Chairman in many ways. I would also limit Service staff involvement in the joint process to one of providing input rather than holding this *de facto* veto of the system. I would insist that the Service chiefs get their advice on joint issues from joint people. It should come from people of the four Services—a joint operation.

I would give commanders-in-chief in the field, who are the ones we hold responsible for fighting the wars, greater say. They have a limited role today. The Secretary has been very helpful in having

the commanders in chief appear before the Defense Resources Board. I would continue in that direction.

I would also enhance the preparation for and service on the Joint Staff and other joint positions—make them much more attractive assignments.

I intend in my last few months in office, Mr. chairman, to work with my colleagues on the Joint Chiefs of Staff on some of the things the Joint Chiefs could implement on their own authority. I have already discussed it with the chiefs, and I have had a working group addressing the issue.

I intend also to work with the Secretary of Defense and the President and to propose some specific legislative action arising out of this study effort. This is going to be a difficult matter, but I think it is the most important defense issue that we will face in the years ahead.

Thank you, Mr. Chairman and gentlemen, for your attention.

Chairman TOWER. Thank you, General, for a very fine statement.

Senator JACKSON. Mr. Chairman, will the general be available when Secretary Carlucci appears in public?

General JONES. I am programed to be out of town also, but I will be available later to come before the committee to testify.

Chairman TOWER. We will see what we can arrange.

Mr. Secretary, the fiscal year 1983 budget will increase by almost \$45 billion in TOA over the 1982 levels. This is a two-part question: How much is tied to advance funding for multiyear programs, and what is the estimated savings generated in the out years from this investment?

Secretary WEINBERGER. The multiyear funding is being applied primarily to the aircraft procurement and the savings that we anticipate from that F-16 additional procurement on a multiyear basis is just under \$400 million, I believe, Mr. Chairman. It is in that range.

We also are proposing—it is one of the additions to the authority figure—we are also proposing to acquire in a somewhat similar manner two aircraft carriers, building them in series rather than separately. We know that we will ultimately have to have them. By seeking the authority this year in the amount of about \$6.8 billion, we will be able to make savings totaling \$753 million over the period of the production by doing those in series.

Those will be the principal ones on which we will be utilizing that method.

Chairman TOWER. That will be in excess of \$1 billion?

Secretary WEINBERGER. Yes.

Chairman TOWER. Could you give us a specific answer on how much is tied to multiyear programs and what estimated savings are? I think it would be very helpful.

Secretary WEINBERGER. We will certainly do that.

[The information follows:]

The fiscal year 1983 budget includes an extra \$546 million to initiate multiyear contracts in fiscal year 1983. This \$546 million is over and above what would have been included in the fiscal year 1983 budget had these programs been budgeted as annual procurements. The Department estimates that the multiyear procurements initiated in fiscal year 1983 will save \$675.9 million by fiscal year 1987. When this amount is combined with the savings from multiyear contracts started in fiscal year 1982, total savings through fiscal year 1987 will total \$1,080.1 million.

Chairman TOWER. Mr. Secretary, one of the major management problems for the Department has been the fact that you are tied to the GNP deflator, which has to be applied across-the-board to all Federal programs. We know that this number does not represent inflation factors that are currently found in important defense procurement areas.

What changes have been made to solve this problem, and do you regard this as an interim solution or final solution to the problem?

Secretary WEINBERGER. I suppose any solution has to have some possibility of being reviewed and revised from time to time. But basically, Mr. Chairman, we have been able to secure the utilization of a deflator which we think will more accurately reflect the cost of defense programs. We had a lot of discussions about this in hearings last year and a lot of the members were concerned that the figures we were using, governmentwide figures, might not accurately reflect the effect of inflation on defense programs. I think that was generally understood. We do have now a new deflator which we will be presenting to the committee and which will, I hope, more realistically attempt to estimate the effect of inflation on defense programs, recognizing that there are a lot of separate factors such as the cost of strategic materials for which there is not all that much of a free market, and the need for highly specialized and trained labor, which is not reflected in the other indices attempting to measure inflation.

So we believe we have made progress in securing the general authority to utilize that and the details of what will be presented to the committee later on.

Senator THURMOND. Mr. Secretary, I want to commend you for the outstanding job you are doing as Secretary of Defense.

General Jones, I just want to say we appreciate the magnificent service you have rendered the country over the years.

General JONES. Thank you very much.

Senator THURMOND. Mr. Chairman, I have to go to another committee. Could I get permission to give General Jones some questions to be answered for the record?

Chairman TOWER. The questions posed by the Senator from South Carolina will be submitted to General Jones for written response.

Mr. Secretary, there is a great deal of assumption on the part of those who advocate reductions in this year's proposed defense budget that savings can be achieved through better management, elimination of waste and abuse, and greater efficiency.

Have you already taken into account what you have done and what you propose to do to eliminate waste, and thereby result in a more efficient way of doing business in this year's budget proposal?

Secretary WEINBERGER. Yes, sir; we have. We have spent a great deal of time through the year because of the fact that it should be done and it is right to do it. Second, if there is any continued suggestion or perception or actuality of any real waste in the Department we undermine the basis for making requests for increases of this kind and in effect make them more difficult to obtain.

Specifically, on the 1983 budget we have reduced outlays by about \$5 billion based on the economies and efficiencies that we believe will produce savings of that kind. Essentially that means that

we have programs that we believe would have cost \$5 billion more than the indicated outlay effect if we had not instituted these efficiencies and economies. We will be working all year to achieve these, just as hard as we will be working to put into effect the programs that have previously been authorized.

I mentioned again in the opening statement that the problem of achieving outlay reduction is a very difficult one in defense because if you are going to get a billion dollars in outlay reductions you are going to have to get pretty close to \$3½ or sometimes \$4 billion in authority and that means you can't even start the programs, and therefore, you are not able to achieve the efficiencies. We believe we have already discounted attempts to cut authorized programs very severely or reduce outlays of those very large amounts based on factors other than simply trying to do things more efficiently.

Chairman TOWER. This touches on an important matter, that is, the percentage of your budget that is actually discretionary spending. We have heard the proposals for reduced spending. Those proposing them don't specify whether they are advocating reductions in outlays or reductions in total obligational authority. We might approach this as a two-part question.

How much of this budget actually is discretionary spending in dollar terms, and what would be the impact, say, of a \$5 to \$10 billion cut, one, on outlays, and two, on obligational authority?

Secretary WEINBERGER. Ten billion would bring the outlays down \$5 billion. That would in effect bring the authority down to about \$30 billion, which would be roughly \$227, something in that nature, depending on which particular programs are chosen.

Chairman TOWER. They would have to apply this to discretionary spending, too?

Secretary WEINBERGER. On discretionary spending, as we mentioned in one definition of the term, we have 93 cents that are committed to fill past programs, or carrying on the normal or what we call minimal operations of the Department. We have made substantial reductions in that. You have therefore 7 cents left to start new programs. I have a little problem with all the definitional terms in the sense that, while you have a discretion to cut out some programs that have started, thereby saving outlays, you lose all of the funds that are already in those programs. More important, you lose the strength that those programs were supposed to add, we believe, to the total.

Chairman TOWER. You have to include the termination costs?

Secretary WEINBERGER. Yes; on base closings you never get anything but increased cost the first year and a half if you close the base because you have to relocate whatever is still left of that function and you have to have to sell the land. You sometimes have to pay lease costs and all manner of things of that kind. To get outlay savings in year one is not only a very difficult thing but it means the only way you can do it in substantial size is to give up a lot of things that are already well under way.

Chairman TOWER. Thank you, Mr. Secretary.

Mr. Stennis?

Senator STENNIS. Mr. Chairman, I am going to be compelled to go shortly on another matter.

I, of course, sense the seriousness of this entire situation. I want to say a personal word to our present Secretary.

I support you in every way, as everyone knows. You have done a fine job in this position, being a relative stranger to it. This thing has grown. I remember so well when we hit a \$100 billion budget less than 20 years ago for the entire Government. You are charged now with the responsibility of over \$200 billion for a worldwide program. You have a fine grasp of it. We have to make our judgments the best way we can.

I want to say this about General Jones. I know he has done a fine job in every way. He has taken a lot of knocking, and I know that too. As former chairman of this committee, I am not attacking him in any way concerning his honor or anything like that. He has served in a rough period of time, and he has always come through, in my judgment, at least on his character. It has served him so well. It is a credit to the military that they can produce the leadership that they do.

I know when the matter first came up about creating the Joint Chiefs, there were misgivings by many. On the whole, you have certainly come through fine, and I commend you, General Jones, for your work.

General JONES. Thank you.

Senator STENNIS. I have never been one of those who accused the other fellow of being unpatriotic, if he challenged the spending of the military dollar. I think what we went through the last year revealed matters in our budget and our monetary affairs that I didn't know were there in such proportions. I believe that is the average experience of the membership in the Senate.

I mention this here to indicate that we have to keep on trying to get our fiscal affairs in better shape so that we can be a powerful nation, and a powerful leader. I think that is the first order of business. I think we should agree on a defense figure as quickly as we can. I say that with all deference to everyone. We need to agree on a good solid figure, put it in the budget and say that will be the legislative figure for the year. We cannot argue this thing from now until next December. I think we have to come out with something definite and take a stand for it before the people—I am talking about the military now—and then try to continue to balance the budget or at least adjust other matters so that the budget can be balanced. I think with entitlements and everything else it can't be balanced.

I am still interested in the military, of course. Sometimes that has to come first, even if it is on credit. But these other things have to have attention. I have been close to the people the last few weeks. They are really at about the end of their patience in some ways. They are expecting us to put things together in a better way.

I am not warning everyone but emphasizing to you, Mr. Chairman, and other members, that we have the capability here, and I think we should try to put it together as soon as we can and come out with something.

I oppose the idea of voting over and over and over again every time there is a new budget resolution and a slight change of facts. Let us see if we can't contribute in that field of getting certainty

here on a vast problem, and try to justify that figure and stay with it. I look forward to further proof on it later.

Thank you.

I have a few more observations and questions and I ask unanimous consent that they be put in the hearing record.

Chairman TOWER. Without objection it will be done.

Senator WARNER?

Senator WARNER. Thank you, Mr. Chairman. Just one opening question to the Secretary.

Mr. Secretary, you are a most skilled budgeter in this administration. For those of use who have been on your side of the seat there is an old saying when you see a cut buildup that you can take a cut and still obtain what you want. Can you give us the assurance that this was not used in the preparation of this budget, that every dollar you requested is absolutely essential and there is no insurance in here against the cut?

Secretary WEINBERGER. Senator, I can guarantee that to you. That is one of the reasons we have expressed so much concern about these rather uninformed and wild suggestions of another \$5 or \$10 billion cut in outlays. This is not an opening offer, to use another term. This is a budget that we feel is absolutely essential from a number of points of view. We continued on the path that you authorized us to start on last year to insure that we acquire the strength in time and that we let the world know that America has resolved to do this. We would be ill-serving our selves and you and the very people if we had puffed up figures of any kind in this budget.

Senator WARNER. We can lock arms with you and go to the mat, you and the administration as a team?

Secretary WEINBERGER. I am confident in telling you so. Mr. Carlucci will say the same thing. I have to tell you that this is the second time now in my career that I find myself being the big spender. It is a very schizophrenic feeling. I would rather tell you that we could get away with the whole thing for a \$100 billion but I would not be fulfilling my responsibility.

Senator WARNER. I join with the others in saying that during the years we have worked together you have handled your job with a great deal of skill.

Secretary WEINBERGER. Thank you.

Senator WARNER. General Jones, I was indeed impressed by your opening statement. This is a subject you have had an opportunity to cover with the Secretary and exchange views on?

General JONES. Yes, sir.

Senator WARNER. Let me portray a scenario which I hope will never occur. It may come on the watch of your successor, or even more likely, the next who takes the chairmanship. We see the ominous signs in the NATO arena today all the way from observations made by the Secretary at breakfast the other morning that some 70 percent of the people in Germany today who were not born at the time of the beginning of World War II and a large portion either fail purposely or otherwise to accept the reality of the threat posed by the Soviet Union. We see momentum toward the interlocking of the industry needs of Western Europe with the Warsaw Pact and, indeed, the Soviet Union. Although I hope not, it may

well be that we will see the unraveling of the NATO structure as an integral part of our planning for years to come.

The question I raise is if NATO were to become unraveled or certainly less effective within the coming decade, and a subsequent President turns to a subsequent Chairman of the Joint Chiefs and says, Well, now, you devise the strategy to protect U.S. interests in view of the absence of NATO. Then the Chiefs would have to say, Well, Mr. President, regrettably on the shelf are the weapons and the systems that do not give me the flexibility to do that. Had I 10 years ago foreseen the unraveling I would have made plans for different weapons systems. Notable among them is the large carrier.

My question to you is: Could we militarily devise a new strategy to protect our interests in the decades hence, recognizing we are laying down plans today for those systems that a future chairman will have to employ in such a new strategy?

General JONES. First, Senator Warner, let me preface my comments, by noting that I have been associated with NATO since 1965.

We have always had crises. I have a great deal of confidence in the alliance. I do not foresee its unraveling. I see difficulties. I am concerned that, No. 1, people make every crisis a litmus test of the alliance and feel that if we don't solve that immediate problem the alliance will fall apart. The polls in Germany show great support for NATO among the citizens to include many of the young, so I have confidence in them.

Senator WARNER. I share that confidence and I will certainly work in that direction. Nevertheless, you and I know that planning spans—even the design of a weapon system—anywhere from a minimum of 3 to 4 years and up to 7 or 8 years in terms of major ships.

General JONES. I understand clearly the point of your question, Senator Warner. [Deleted.]

Senator WARNER. You mentioned that you are suggesting at some point in time strengthening of the Office of the Chairman. Where would that strength be drawn from? In the sense that you are going to add to your strength does that mean there is a subtraction in strength elsewhere, particularly in the civilian component, the balance between the civilian and the uniform?

General JONES. I would like to see the military have more influence within the Government and on actions within the Government. I believe one earns influence; it is not given. We need to do a better job of advising the Secretary on various strategic issues related to U.S. capabilities and limitations. We would not be taking anything away from the Secretary because ultimate authority would continue to rest there, but the military would have greater influence in the system by having a better product. Also, very frankly, the system would take a little bit of sovereignty away from the Services. There would still be individual services but in many areas where constrained resources are addressed, it is very difficult to get four service chiefs to agree and still retain the support of their constituency, their services. So, some limitation on sovereignty of the individual services would be necessary.

Senator WARNER. I join with the others in saying that when you depart this Office you will take with you the only thing anyone can

take, and that is peace of mind that you did the very best you could, and having contributed to the dignity of the uniform you wear and others in the armed services.

General JONES. Thank you.

EDUCATIONAL PACKAGE FOR UNIFORMED SERVICES

Senator WARNER. Mr. Secretary, I notice, or tried to read your statement, I may not have caught it but you did not make reference or the emphasis I had anticipated on improving the life style of the persons that wear the uniform, and in particular what emphasis you intend to place this year on the educational package for the uniform services.

Secretary WEINBERGER. Senator, we did not stress it in the statement, that is quite true. We have, however, had great support from the Congress in the request for the military pay increases. They have been a big factor, I am sure, in the really excellent recruitment and retention figures, the educational quality of the people coming in, measured by AFQT tests, number of high school graduates, and so on. All this has improved enormously in 1981 over previous years.

I think also part of that is the fact that the national morale has improved and, as the President said in his state of the Union message, it is an honor again to wear the American uniform. I think that is a vital factor in it, too.

As far as coming years are concerned, we believe that we have reached a level of military compensation which is comparable to civilian pay. We think that a great part of the catchup that was so vitally needed has been done and therefore the thing that we believe is most essential now and the thing that we are told at least in a preliminary way by most of our studies is that educational benefits for the service man and woman, and also even more important for their dependents, are the things that would be most attractive in continuing to urge people into the armed services and the thing that would be the most equitable.

We are looking at a variety of possibilities for educational benefits for service people as well as for their dependents. We hope to be able to report a recommendation to you during the course of the spring.

Senator WARNER. So there will be a recommendation from the Government specifically, shall we say, for a GI bill of some type?

Secretary WEINBERGER. Yes, sir. That would be my strong hope. It has to go through several offices in the administration as you know. My hope and the recommendation from our Department, speaking frankly, will be for some kind of educational benefits that will have a long range and, I think, very beneficial effect on recruitment.

Senator WARNER. Thank you.

Chairman TOWER. Senator Jackson?

Senator JACKSON. Mr. Chairman, I want to thank the Secretary for a good overall statement, and commend General Jones for having articulated, I think, some good recommendations. I want to look at the transcript. He did it from the top of his head and did it very well.

General JONES. Thank you.

Senator JACKSON. Mr. Chairman, I see this Secretary facing something that other Secretaries have not had to face, and that is the political problems. You face a bipartisan leadership in both parties saying "we are going to cut the budget by X amount." That is repeated over and over again. So I hope we can get this act together because it is a part of the rhetoric now—I am sure that I need not tell you—in both political parties and the leadership of both political parties. So that is a major problem.

The second political problem, I know you understand, is the peace movement in Western Europe. We can authorize the neutron warheads and we can authorize the cruise missile, but if you can't deploy them you will have outflanked the very strategy that we are trying to put in place.

So I am pleased with the President's peace offensive speech in November which I had urged upon him a year ago, as you know, very strongly. Eisenhower first made comparable proposals back in 1953. The mistake of all Presidents in both political parties has been the failure to follow through. We need to mobilize a strong Western peace offensive because it is worth tanks, guns, and planes in maintaining our deterrent and encouraging sensible negotiations.

The Soviets have very clearly, in my view, exploited the hopes, sincere feelings of the people, especially in Holland, which is the center of the neutralist-type movement, as you know. That movement—marked by proposals for unilateral disarmament—is underway in this country, in the churches for example. The bishop of the Catholic Church in Seattle has recommended to his parishioners and to all people to withhold half of their income tax as a protest against our defense budget.

So I want to emphasize the urgency and the need to address these political problems because otherwise we will be going through an academic exercise here.

Secretary WEINERGER. I agree completely with both of those statements. I think they are very well put. I agree that the problems in Europe are certainly not all Communist inspired. The Communists, however, must be quite delighted with what is going on. The people, to whom you refer, I think, are sincere people for the most part, who don't want a war any more than we do. But they are going about it in a way that will most likely bring on a war. It is a vital part of our strategy and necessary part of any strategy to try to bring the NATO nations to the point where they will make greater contributions to the goal that we all have to reach.

Senator JACKSON. The Soviets, for example, advocated a Nordic nuclear free zone. [Deleted.] Yet the Soviets run their *Whiskey* class submarine virtually into the navy yard, on the rocks, as the saying goes, and they get away with it. They said it was a navigational error in a serious vein—showing they have no sense of humor. The tragedy is that they get away with it. There is no followthrough on our part. We failed to exploit this issue properly. I know we are trying but we have a long, long way to go in this political arena.

Secretary WEINBERGER. I agree. Aside from what we were able to do I have to point out I think that submarine did more to bring

Swedish public opinion around than anything else could have. While there was not a tremendous amount of action taken in the sense of holding the sub very long or things of that kind, I have noticed a major change in public opinion among the leadership in Sweden.

Senator JACKSON. Right. Let me just mention Sweden. I commend you for tightening up on their technology transfers. As you know, we sold them computer components which ended up in Russian hands that were to be for commercial purposes. But now are reported to have air defense applications.

Secretary WEINBERGER. I am very familiar with this incident.

[Deleted.]

The whole problem of technology transfer is something we really have to address because we are helping the Soviets, as I said in my statement. They have limited capability of developing, they do have the capability of copying. We have to do a great deal to tighten up on technology transfers in spite of some immediate short term trading advantages that may seem apparent in some sales proposals which would be denied under tighter controls.

Senator JACKSON. I commend you for what you are trying to do in DOD in terms of technology transfers because we got the amendment through in 1979 that placed more authority in your hands. To me it is one of the critical areas because the Soviets are taking advantage of a hemorrhage of Western technology.

I have been convinced for a long, long time you are not going to deter the Soviets in the Middle East by just relying on RDF, any more than we could deter the Soviets in NATO by having all American troops in the United States moved to Europe in a crisis by airlift. You know we debated that issue in the 1950's and 1960's.

Are we making any real progress in pulling together those countries in the area in the event of a Soviet move into Iran? I think you cannot dismiss the possibility of such a Soviet move in light of the 1921 treaty, and in the light of developments in the last few weeks in which Moscow is giving a lot of help to Iran and not to Iraq. My thesis is very simple: I don't think you can deter the Soviets by forces in the United States and/or the forces we now have at sea over there. I hope the administration will really, really push hard in developing the assets that are there.

You have been to Turkey, I know you are trying there, but when you get down to it it is only Turkey, Egypt, and Israel that have credibility—not necessarily in that order. I hope the administration will recognize the importance of these assets in the area. I don't believe the Russians will move if they see a credible presence in the area.

Secretary WEINBERGER. Could I respond in closed session? I think it will become apparent when I give the answer to it.

Chairman TOWER. Everyone in the room is cleared for top secret.

Secretary WEINBERGER. Essentially, Senator, the answer is that we have no dispute with you whatever about the necessity for it. The rapid deployment force is designed to be supplemented and reinforced by other elements and we are trying to put together that support [deleted]. I have to tell you that that is not easy.

[Deleted.]

Egypt has been the most forthcoming and they openly offered, when President Sadat was alive, Ras Banas. We have requested funds to start developing that as the best possible or closest base, although it has many deficiencies.

We have also had talks [deleted] about it with some degree of success. We cannot at this point get the things we most need which are facilities within the Mideast countries to build the necessary things required for ultimate deployment of the rapid deployment force, and other forces. We are aware of this problem.

What we are trying our best to do, is to persuade as many of the Mideast countries as we can, that facilities ought to be made available for their own interests, [deleted]. We have high hopes that this can succeed in time, but I have to tell you, as you know, that it is a slow and difficult process.

I do want you to know in this classified response that we are making every effort to do it. [Deleted.]

Senator JACKSON. Mr. Secretary, will you supply for the record and to me a detailed explanation, including all the data, prices and what-not, on the participants in connection with the C-5 and KC-10 airlift decision? I understand that was not based on competitive bidding yet you had some proposals. I would like to have a complete and detailed explanation, and the rationale by which you came to that conclusion, and so on.

Secretary WEINBERGER. We have a lot of that data already as a result of the material gathered during the course of the examination. Yes, we will do it. The final conclusion was that we will have more airlift sooner and at a more efficient cost ratio by the route we have recommended to the committee. It was not a totally easy question but wrapped up in it was the uncertainty of developing a new airplane.

Chairman TOWER. That matter will be gone into in great depth.

Senator JACKSON. Boeing participated in this of course. You said you would get them faster the way you decided. I would like to have an explanation on all those points, the time of delivery, price, capability, and so on.

Secretary WEINBERGER. We are fully prepared to do it and we will be glad to do it.

Senator JACKSON. Can we have that in the next 2 or 3 days?

Secretary WEINBERGER. Yes, sir.

Senator JACKSON. If I could get that, who supported the proposals, price, delivery times, and capabilities.

Secretary WEINBERGER. Yes, sir.

[The information follows:]

The Air Force considered an array of airlift acquisition options in arriving at a final airlift program for the near term. These included CRAF, B-747F, CX(C-17), KC-10 and C-5.

1. CIVIL RESERVE AIR FLEET (CRAF) ENHANCEMENT PROGRAM

This option provided for augmentation of the Civil Reserve Air Fleet (CRAF) by modifying existing passenger aircraft, owned by the airlines, with cargo features. Under this program the Air Force pays the modification and the marginal operating costs to civil airlines of owning and operating an aircraft that can be converted rapidly to carry oversize and bulk cargo in lieu of passengers. Viable offers were received from three carriers for 49 DC-10-10s, and four DC-10-30s.

This option was rejected for several reasons. The most notable are that the DC-10-10s are very range limited, requiring two ground refuelings to reach certain crisis destinations; and, that the projected cost was much higher than expected. Since these CRAF airplanes would be available only in a declaration of national emergency, meaning they may not be available in certain critical scenarios, the dollar cost and critical requirements dictated that we seek a more responsive alternative.

The Department of Defense is not, however, foreclosing the possibility of CRAF modifications, particularly for new production wide-bodied, long-range aircraft. Funds are tentatively budgeted in fiscal year 1984 and beyond for this purpose. Airline proposals for modification of aircraft will be evaluated on their individual merits in terms of availability, relative cost and contribution to national security in a declared emergency. It is hoped that the contracting authority provided in the fiscal year 1982 Defense Authorization Act will make CRAF modifications less risky for the airlines, and, therefore, less costly to the Department of Defense.

2. PROCUREMENT OPTIONS

The procurement options are summarized in the table below. All dollars shown are fiscal year 1981.

	KC-10	C-5	C-17	B-747	B-747
Proposed program (number aircraft):					
Buy.....	44	50	64	40	32
PAA.....	39	44	57	35	28
Million ton miles per day ¹ per aircraft.....	^a 125	186	145	234	292
Million ton miles per day ¹ added by program.....	^a 4.9	8.2	8.2	8.2	8.2
Weight of cargo load (tons) (normal/maximum).....	60/8 ^c	75/120	45/86	88/125	.....
Cargo compartment size (width, height in feet).....	20/6	19/13	18/12	19/8	.....
Daily utilization surge rate (hours/day).....	^d 10	12.5	15.6	12.5	15.6
Unit acquisition cost (millions).....	\$52	\$118	\$112	\$70	\$70
Acquisition program ^a cost (billions).....	\$2.4	\$6.1	\$10.3	3.0	2.4
20 year operations and support cost (billions).....	\$2.6	\$8.0	\$6.7	6.8	5.6
Program 20-year operations and support cost (billions).....	5.0	14.1	17.0	9.8	8.0
First delivery (fiscal year quarter/year).....	3/1984	3/1985	4/1987	1/1984	1/1984
Last delivery (fiscal year quarter/year).....	2/1989	3/1989	4/1991	1/1988	3/1987
Initial operations capability (fiscal year quarter/year).....	(^e)	(^e)	4/1988	1/1985	.....

¹ Ton-miles per day computations are from major airfield to major airfield and do not take into consideration cargo throughput capacity to small intra-theatre airfields.

^a Assumes cargo use only; does not consider multiplier effect of cargo/tanker role in deploying tactical air squadrons, or for refueling other aircraft. Assume 10 hours per day rate; proportionately higher at 15 hours per day rate.

^b Acquisition program cost includes initial spares, technical data, R.D.T. & E., and MILCON (R.D.T. & E. and MILCON are excluded under unit acquisition cost).

^c Ten hours per day surge rate for KC-10 reflects existing posture as constrained by crew ratio authorizations under current planning; surge to 15 hours is logistically supportable.

^d As received.

a. B-747-200F

The B-747 option was rejected because it ranked lowest in terms of overall military utility among the acquisition proposals considered. Moreover, this aircraft does not offer a near-term option because training capability and the logistics support elements would have to be created to attain an operational capability.

The B-747 was considered as an alternative to the C-5 and C-17. The B-747-200F lacks certain features required for the efficient transport of military equipment:

- Full cargo compartment cross-section loading openings;
- Adequate cargo compartment floor strength;
- Integral, self-deployable cargo ramps;
- Truckbed-height loading;
- Drive-on/drive-off capability;
- High-flotation landing gear; and
- In-flight refueling.

Loadability, particularly of outsize type cargo, is the major problem with the B-747. Although the Boeing Company provided data indicating a high percentage of loadability, to attain this percentage a portion of the equipment requires special handling and/or major disassembly (removing rotors, snubbing wheels, and loading on special fixtures). In addition, it requires extra time and manpower for disassembly and reassembly. Boeing does not account for this extra time. Loadability of mili-

tary equipment involves more than just clearances through the doors. Rapid on- and off-loads are essential to the smooth, high-volume traffic flow expected in major deployments. Aircraft which offer drive-on and drive-off loading have significant advantages over those which require extensive high lift materials-handling-equipment support. A lowered nose concept would somewhat improve the loadability of the B-747. However, loading on the inclined floor would require vehicle tie-down with drivers holding brakes—more time consuming and less safe than level floor loadings.

b. KC-10

The capability of the KC-10 to support airlift requirements is unique. This airplane is a very efficient carrier of bulk and oversize cargo with essentially the same limitations as the 747F; it can be used to extend the range and payload of the C-141 and C-5 transport aircraft through aerial refueling; it can deploy tactical fighter squadrons by carrying personnel, equipment and simultaneously refueling the deploying aircraft.

The KC-10, as a combination airlift/tanker aircraft, reflects the need to deploy both air and ground combat units. In the early days of a deployment, the first units required are fighter squadrons, whereas after the first week the requirements are predominantly for the movement of land forces. The KC-10, as a "swing" aircraft able to support both types of inter-theatre air mobility requirements, will greatly ease this transition.

Additional KC-10s are being procured both because of its flexible capability, and also because it is available soon at a very favorable price within the framework of an existing contract negotiated under intense competition.

c. C-17 versus C-5

With respect to satisfaction of the requirement for at least 10 million ton miles per day of outsize capability, the C-5 delivers the most capability, soonest, at less program cost than the C-17. Given the seriousness of our airlift shortfall, the C-5 is clearly the most attractive near term option. For example, by the end of fiscal year 1987 we will have delivered 17 more C-5s than we could have delivered C-17s with total program concurrency, and will have 3.8 million ton miles per day more capability.

The early availability of the C-5 over the C-17 (two years with considerable concurrency, three years by conservative estimates) is made possible by the existence of government-owned tooling and engineering drawings valued at more than \$750 million and, for many C-5 items, qualified sources of supply. The C-17, on the other hand, represents a new development with attendant research and development, production, initial training, and operational costs and risks.

The overriding consideration in the choice between the C-5 and C-17 is the conclusion—documented in CMMS and numerous other studies over many years—that a significant airlift shortfall exists now! Consequently, the objective is to increase airlift capability as quickly as possible. The Air Force originally recommended the C-17 vs. the C-5 when funding constraints resulted in delivery profiles that were not significantly different for the two aircraft. Under those circumstances, the C-17's greater military utility (including air drop, combat on-off load, as well as intra-theatre capability) and lower operating cost seemed to make it the better choice. Given the opportunity to increase funding, as warranted by shortfall now, Air Force selected the C-5 because production deliveries could be made earlier than under the C-17 program.

Hence, a good program soon was chosen over a somewhat better program later. This choice is also consistent with an apparent signal from Congress which eliminated RDT&E funds for airlift in fiscal year 1982.

In summary, over the past several years when Air Force pursued the development and acquisition of the C-X (C-17) aircraft, fiscal constraints did not permit the identification and execution of the obvious "quick fix" solution offered by a combination of the KC-10 and additional C-5 aircraft. Rather, available funding pointed to a stretched out procurement with a meaning fully enhanced operational capability closer to 1990 than to 1985.

With the heightened awareness that readiness is absolutely dependent on responsive and capable airlift, the resolve to try to fix the problem sooner led to consideration of increased funding for near term airlift procurement. As the fiscal year 1983 budget process drew to a close, it became certain that fiscal consideration would permit increased funding for airlift in the near term. At this point it became clear that, in addition to the KC-10, the C-5 procurement would permit earlier reduction of the shortfall as described above.

There is no C-X (C-17) production program. Our pressing near-term inter-theatre airlift shortfall will be satisfied by the combined KC-10/C-5 program. Although the KC-10/C-5 program will add substantially to our inter-theatre capability, it will not provide the minimum additional outsize/oversize airlift recommended in the Congressionally Mandated Mobility Study. An aircraft designed to the specifications established for the C-17 will be required in the longer-term (late 1980s and early 1990s) for two reasons. First, there is a need for outsize intra-theatre capability to augment the airlift provided by the C-130s. Second, there will be the need to replace C-141s and some C-130 aircraft beginning in the early 1990s.

We are going to propose, therefore, that, subject to Congressional approval, a modest fiscal year 1982/1983 C-17 R&D effort be continued with funds (\$32M) from the unobligated fiscal year 1981 C-X appropriation. This effort would focus on improvements included in the C-17 design which can be methodically developed to produce more efficient structures and more efficient energy use for both military and civil aircraft. Specific areas to be investigated include low speed powered lift, engine core thrust reversing, winglet configuration, and cruise bay estimates. Another possible area of investigation is use of advanced structural materials.

In the longer term a C-17 type aircraft will be required, not only for airlift missions, but also as a common airframe for other unrelated missions, such as worldwide airborne command and control, and use as a tanker for the Marine Corps.

Chairman TOWER. Senator Humphrey?

Senator HUMPHREY. Thank you, Mr. Chairman.

Good morning, Secretary Weinberger and General Jones.

Mr. Secretary, you commented earlier on statements made by certain Members of Congress that surely there are \$5 to \$10 billion in the Defense budget which can be cut, and you characterized such remarks as uninformed. In addition to that, there is the contention, alluded to this morning, that because of the deficit we simply can't afford the kind of expenditures which are going to be recommended to us by our highest military experts.

I would like to make a point for the record that there is simply no doubt that we can afford this budget. It is a question of how we order our priorities. On that score, can you give for the record some characterization of the kind of spending the Soviet Union is undertaking relative to its GNP?

I would like to make the point that they are spending vastly more than us with a much smaller national economy.

Secretary WEINBERGER. They are indeed, Senator. When you get to the precise percentage of their gross national product, my memory is that it is about 14 percent. We will take a more conservative figure.

There are several factors that we have to consider. One is that they have been doing this for a very long time without any real interruption since 1961, all during detente, all through the SALT period, all that time when we hoped a better feeling could provide a rationalization for us to reduce defense spending. We did reduce in many cases when we had revulsion from Vietnam, but the Soviets never stopped. Since 1972 the Soviet dollar cost of investment has exceed ours by \$440 billion. They have a higher rate of spending.

They also have another significant factor in their favor. About 42 percent of our Defense dollar goes into personnel costs. There are different ways of figuring that. Some people could come out with 46 percent. It is in the neighborhood of 40 to 45 percent, of each Defense dollar that goes to personnel cost.

Chairman TOWER. It has been higher than that.

Secretary WEINBERGER. Yes. But that amount includes military and civilian pay allowances, retirement, various life enhancement things, including housing and a whole range of things that we do not question. We say personnel costs should be lower, but it is a fact of life.

For the Soviet's, manpower costs to be most generous, is 16 percent of every Defense dollar. That I think is generous because I think the actual figure is closer to 13 percent. They have use of troops for harvesting and things like that. It is only about 15 percent, roughly. That means that they can put roughly 85 percent into other things than personnel costs.

We have at best about 50 percent or a little less in my calculation. When you have that kind of difference, coupled with the fact they have never let up, then they have the momentum going. They are taking delivery of things right now that they ordered in the 1970's. They redesigned a more accurate strategic set of weapons that will be introduced in [deleted] but they have never lost that momentum. We don't have the momentum. It takes us a lot longer to catch up.

You made a valid point, certainly. One of the bases of my saying that we should not make these big reductions is simply because of the fiscal situation we face.

The other point, that I am sure you know, is the fact that the biggest cut I have seen yet proposed is \$10 billion more. Undoubtedly some people will top that. At the moment that is the biggest one. That, sadly, is not going to make a significant deduction in the deficit to the point where the whole economy is going to turn around overnight. As a matter of fact, it will be a small part of that deficit. Nobody likes that deficit or anything about it but to do further crippling of the American rearmament effort, of our foreign policy effort, to give further encouragement to the Soviets, to perhaps give them dangerous assurances I think would be extraordinarily unwise.

Senator HUMPHREY. You pointed out that the Soviets get more bang for their buck because of smaller personnel costs. Certainly we don't begrudge pay and benefits to our people. I think some of us feel they are not adequate. It is true that the Soviets get more bang for the buck and they are also spending on a dollar equivalent basis more than we are, isn't that true?

Secretary WEINBERGER. Yes.

Senator HUMPHREY. I understand that in the last 10 years, and this supports what you have been saying, the Soviet Union has outspent us by about 50 percent in dollar equivalent with an economy half the size of ours.

Secretary WEINBERGER. Yes, because they have no constraint on what they do to their own economy. They have no worry about the lives of their citizens. They can continue on this path. It is absolutely true.

Senator HUMPHREY. In the final analysis should not Defense expenditures be based on the threat?

Secretary WEINBERGER. Yes. That is what we are doing. We are not pulling figures out of the air and saying this is a nice round number. We are saying this is the amount required of this one rather narrow 12-month arbitrary set of boundaries. This is the

amount required to carry out this increment of a plan designed to gain for us not superiority but the degree of strength that is necessary and sufficient to deter attack. That has to be our best estimate. It is based on the fact this is the kind of threat we face. It was not formed in any vacuum, I assure you.

Senator HUMPHREY. Do you know of any government employee, civilian or military, or anyone in the intelligence field, civilian or military, who does not feel that the threat has grown enormously during the decade?

Secretary WEINBERGER. I have not encountered anybody. [Deleted.] The threat is there, it is growing. It is a very real one. It is something that requires us to take action immediately.

Senator HUMPHREY. As you know, I am chairman of the Subcommittee on Preparedness. I am curious to determine whether the O. & M. budget comprises a larger share relatively speaking of the entire DOD budget in 1983, the same or less.

Secretary WEINBERGER. I will get the exact figures. My impression is that it is larger because we have tried to increase the readiness, we have tried to increase the ammunition reserves, we have tried to increase the training time, the flight time, and all of those things. I think it has almost had to have a larger percentage increase even though the total increase is indeed large.

Senator HUMPHREY. The subject of the GI bill came up. To be sure personnel difficulties are an element of our preparedness or lack of it. I am increasingly disturbed that we are handing out grants and loans at subsidized rates to young people who are not required to give any kind of service in return. It just seems to me that we ought to get smart and say to these young people: "Look, if you want a loan or a grant how about giving us a couple years in the service."

How do you feel about that as a general concept?

Incidentally, I would urge you, if you agree with this, to take it up with the President and to try to make this an administration position. It seems to be foolish to be handing out these grants and loans without requiring something in return especially in light of existing personnel problems.

Secretary WEINBERGER. I think we do something of this kind with the grants for medical education.

Senator HUMPHREY. Yes. That is a very narrow field.

Secretary WEINBERGER. Yes, it is a narrow field. I don't know how the President would feel about it with respect to his strong desires that the Armed Forces, to the greatest extent we can and as long as we can, be on a voluntary basis.

Senator HUMPHREY. This would be voluntary. If they want a loan or grant, they would have to serve 2 years.

Secretary WEINBERGER. At the moment we are in a situation—unless there is a very large expansion, which we are not requesting—where we are recruiting all the manpower that we can take on a voluntary basis.

Senator HUMPHREY. I am suggesting that you would get a better cross section of society and higher caliber of person overall with this kind of incentive.

Secretary WEINBERGER. We can look into it very carefully. I have not thought about it, frankly, because of the fact that we are get-

ting the numbers that we can take at the moment. Let's look at it and we will have Assistant Secretary Korb and his group, who are very familiar with all of these matters, look at it along with the GI bill benefits. Certainly the crux of it is there with respect to medical education where the need is very great for those specialties.

Senator HUMPHREY. I am simply pointing out that we have a crying need for a better cross section of society and a higher caliber of people. I know you have made a lot of progress in recruiting, and I commend you for that, but I think we have a long way to go. It is foolish for us to be handing out these grants and loans without requiring something in return.

Chairman TOWER. Senator Byrd?

Senator BYRD. Thank you, Mr. Chairman.

At the moment I am interested, Mr. Secretary, in facts and figures. You are seeking \$258 billion for TOA and \$216 billion for spending outlays. Am I correct that the 1982 figure for TOA was \$212 billion?

Secretary WEINBERGER. \$214 billion, sir.

Senator BYRD. \$214 billion?

Secretary WEINBERGER. Yes, \$214.2 billion.

Senator BYRD. For outlays, \$182 billion?

Secretary WEINBERGER. \$182.8 billion, yes, sir.

Senator BYRD. What were the comparable figures for 1981?

Secretary WEINBERGER. \$176.1 billion for obligational authority and \$156.1 billion for outlays.

Senator BYRD. How about 1980?

Secretary WEINBERGER. We can get it for you. I don't have it in mind, unfortunately.

[The information follows:]

FISCAL YEAR 1980 TOA AND OUTLAY

In fiscal year 1980, our TOA was \$142.2 billion, and outlays were \$132.8 billion.

Senator BYRD. What amount is in the new budget for military retirement?

Secretary WEINBERGER. Military retired pay is \$16.5. In 1982 it was \$15.

Senator BYRD. Do you have 1981 and 1980?

Secretary WEINBERGER. I don't, but I can get it easily for you.

Senator BYRD. Please get that for the record.

[The information follows:]

In fiscal year 1981, \$13.7 billion was obligated for military retired pay. The comparable figure for fiscal year 1980 was \$11.9 billion.

Senator BYRD. What is the unfunded military retirement?

Secretary WEINBERGER. That I will also have to get for you, sir.

Senator BYRD. Last year I had a difficult time getting that figure. I don't see why it is not available. I assume it is available?

Secretary WEINBERGER. I did not realize you had trouble getting it, but let us see what we can do. We will get it for you.

Senator BYRD. Secretary McNamara was not necessarily my favorite Secretary, but he brought that figure with him every year. Then all of a sudden, not you, but 5 or 6 or 7 years ago, they stopped supplying it.

I would like to get that figure as early as I can, prior to next Monday.

Secretary WEINBERGER. We will certainly do our best to get it for you, sir. I don't have it with me. I am sorry. I don't have Secretary McNamara's ability to carry all these things in my head.

Senator BYRD. He had it in his written statement.

Secretary WEINBERGER. I feel a little better then. Anyway, we will get it for you.

[The information follows:]

Each year the Chief Actuary of the Department of Defense publishes a valuation of the military retirement system. The last valuation, based on September 30, 1980 data, indicated an unfunded liability of \$431.1 billion.

The \$431.1 billion figure is generally used to characterize the unfunded liability of military retirement. It is the present value of accumulated plan benefits less the present value of contributions. This concept assumes retired pay accrual. The components of the unfunded liability are summarized below:

	<i>Billions</i>
Present value of future benefits.....	\$523.3
Present value of future contributions.....	92.2
Unfunded liability.....	431.1

Senator BYRD. How much in dollars is there in your new budget—this would be on the outlay side—how much in dollars for salary, gross salary, special compensations, bonuses, et cetera, BOQ, cost of operating the BOQ's, the housing allowances paid to the personnel, recruiting costs and all that, what do those figures add up to?

Secretary WEINBERGER. When you throw in the recruiting, it adds another category. My memory is that the first three items that you mentioned are running roughly about 53 percent of the outlays, which would mean that out of the \$215 billion, probably something in the neighborhood of \$112 billion, something of that kind, would be the outlay effect of that.

Again, we will get it exactly for you.

The recruiting adds a different dimension because that gets into the salaries of the people who are doing the recruiting.

Senator BYRD. They have to be paid.

Secretary WEINBERGER. Oh yes, indeed, and the advertising contracts and the rentals, that kind of thing. We have that figure here.

Senator BYRD. I think that figure of 53 percent you used is low.

Secretary WEINBERGER. I have forgotten whether in that 53 percent, we include the housing allowances or not. We try to include in that the cost of personnel, the cost that relates to personnel.

Senator BYRD. Housing relates directly to personnel?

Secretary WEINBERGER. It does, indeed.

Senator BYRD. And medical costs?

Secretary WEINBERGER. Yes, they would be in there.

Senator BYRD. The entire medical cost of the Department of Defense is included in this figure?

Secretary WEINBERGER. Yes, sir. Now, on the recruiting expenditure, we have some figures that attempted to develop some differences between the continuation with the All-Volunteer Force as op-

posed to the draft. We concluded that going to the draft would add more cost to that.

Senator BYRD. What is the cost of the recruiting?

Secretary WEINBERGER. The recruiting and advertising runs slightly over \$1 billion. The various bonuses which are part of this are \$175 million. The reenlistment bonuses are \$589 million. The existing educational benefits are \$14 million. Then, that first-term pay, which is the pay and allowances of all the people who are in grades E-1 to E-4 with 2 years or less service, that is about \$8.4 billion.

Senator BYRD. Thank you.

Now, on page 14 of your statement, you say,

We have decided to procure 50 new C-5 aircraft and 44 additional KC-10 tanker-cargo aircraft.

Secretary WEINBERGER. Right.

C-X PROGRAM

Senator BYRD. What is the status of the C-X program?

Secretary WEINBERGER. The C-X program, Senator, resulted in a conclusion that if we went to the C-X program that the C-17 would be the desired aircraft if we decided to procure a new, differently designed airlift carrier. We concluded after a very lengthy study—and it will be in the material I will supply Senator Jackson—that it will be more cost effective and we would get additional airlift a lot sooner, which we think we need, and which we attached a great deal of support to the rapidity with which we can acquire this, if we went with a modified C-5, taking advantage of some of the lessons learned from the original design and added the KC-10's in known quantities; whereas, the C-17 would have to be a new plane, with a lot of design problems and production problems, that might arise, and it would take us longer.

We believe over the length of the program the cost ultimately will be about a wash, but that it is essential that we get the additional airlift capability as quickly as we can. That was the basis of the decision.

Senator BYRD. So, you will scrap the C-X?

Secretary WEINBERGER. Yes. C-X (C-17) production is canceled, but we propose, subjected to congressional approval, a modest fiscal year 1982-83 C-17 R. & D. effort with funds (\$32 million) unobligated from the fiscal year 1981 appropriation for C-X.

Chairman TOWER. Senator Jackson did pose a question on that. The Secretary has agreed to supply all the facts on this.

Senator BYRD. It was not clear from Senator Jackson's question.

Chairman TOWER. C-17 is the C-X.

Senator BYRD. The C-X program has been scrapped?

Secretary WEINBERGER. Yes, sir, production of the C-17 is canceled but we propose a modest C-17 R. & D. effort, as stated in the insert for the record requested by Senator Jackson.

Senator BYRD. I think that is wise. I wanted to get that clear.

Secretary WEINBERGER. Yes.

Senator BYRD. On page 16 of your statement you say:

Our current funding policies result in specific 5-year savings in economies and budget authority of \$38.7 billion. Then if fiscal year 1987 is included, the figure grows to \$48.2 billion.

Would you for the record document what the savings are on? Is that savings in TOA?

Secretary WEINBERGER. That is budget authority.

Senator BYRD. Not in spending?

Secretary WEINBERGER. Well, we can certainly get that for you. I would suspect the outlay effect of that would probably somewhere close to \$21 or \$22 billion.

Senator BYRD. In that \$38 billion in budget authority, is the elimination of the C-X included?

Secretary WEINBERGER. Yes, to the extent that it would be reflected in the earlier years of the program, because we have substituted for it the combination of the C-5 and the KC-10, but to the extent there is a savings by that shift in the earlier years, that would be reflected, yes, sir.

Senator BYRD. If you don't mind documenting or detailing those savings, it would be helpful.

Secretary WEINBERGER. Yes, sir.

Senator BYRD. Thank you.

[The information follows:]

The savings figures cited and also included in the January 25, 1982 letter to Chairman Tower from Deputy Secretary Carlucci were preliminary figures. A review of savings data reported by all DOD components has now been completed and the savings figures are now actually higher than previously cited. A revised year-by-year savings summary in budget authority terms is displayed below along with a display of associated outlay reductions as requested.

SAVINGS

[In billions of dollars]

	Fiscal years—							Total 1981- 87
	1981	1982	1983	1984	1985	1986	1987	
TOA.....	0.5	4.4	7.3	9.0	9.2	11.0	10.0	51.4
Outlays.....	.3	3.4	6.3	8.1	9.2	9.9	10.6	47.8

In the case of the C-17 program no savings associated with termination of the program have been reflected in the estimates above since we utilized all the C-17 savings for the same purpose, strategic airlift enhancement. Had we taken credit for the TOA and outlay savings occasioned by the termination they would have been as follows:

[In millions of dollars]

	Fiscal years—					Total 1983-87
	1983	1984	1985	1986	1987	
TOA.....	(-)	(-)	(4)	(9)	(22)	.....
Procurement.....	30.0	205.2	1,544.1	2,210.3	4,094.3	8,083.9
R.D.T. & E.....	223.5	568.7	515.8	293.1	264.3	1,865.4
Total.....	253.5	773.9	2,059.9	2,503.4	4,358.6	9,949.3

	Fiscal years—					Total 1983-87
	1983	1984	1985	1986	1987	
Outlays:						
Procurement.....	2.8	33.3	247.4	1,044.5	1,950.1	3,278.1
R.D.T. & E.....	138.4	426.4	515.8	373.9	282.9	1,737.4
Total.....	141.2	459.7	763.2	1,418.4	2,233.0	5,015.5

¹ Additional outlays of \$4,933.8 million through fiscal year 1982.

AIRCRAFT CARRIERS

Senator BYRD. Now, I have just one other question: The two carriers, what figures are you using for the aircraft carriers themselves, leaving out the aircraft that must go aboard the carriers, but just the ship?

Secretary WEINBERGER. The budget authority required, Senator, for the two carriers would be \$6.79 billion.

Senator BYRD. Does that include the aircraft for the carriers?

Secretary WEINBERGER. No, I don't believe it does. Those are separate items; they are under separate categories.

Senator BYRD. \$6.79 billion for the two, just for the ships?

Secretary WEINBERGER. \$6.79 billion.

Senator BYRD. Just for the ship?

Secretary WEINBERGER. Yes, sir, and the ship fully fitted, of course, but without the aircraft.

Senator BYRD. \$6.7 billion without the aircraft?

Secretary WEINBERGER. Without the aircraft, yes, sir.

Senator BYRD. In regard to the embargo, Mr. Chairman, I am not sure but I think this figure has been published. If it is not, I am sure it will be published before the night is over—\$216 billion—is that embargoed?

Secretary WEINBERGER. My impression was that everything we talked about here was embargoed until next Monday, so that we would feel free to go back and forth. That was the basic assumption, the assurance I gave the President when he authorized me to come.

Chairman TOWER. If you will yield, Senator, that will be made public, the record of this hearing will be made public.

Senator BYRD. I understand that, but has that figure not already been published—\$258 billion?

Secretary WEINBERGER. I have not seen it. There may have been all kinds of things happen in the way of leaks or whatever. It certainly has not been published by any official means. People have undoubtedly discussed it. I have seen some wrong guesses. There may be some right ones; I don't know. To the best of my knowledge, it hasn't. I know it has not been published by the administration.

Senator BYRD. Thank you.

Chairman TOWER. Senator Jepsen?

Senator JEPSEN. Thank you, Mr. Chairman.

Mr. Secretary, I did meet this morning with Dr. Korb. The comments have been made on the GI bill that Senator Humphrey mentioned, comments in regard to looking into educational grants. The

possible application of a service requirement or some type of service, is something I hope you will look into. You have indicated you would do so.

I was pleased to find the recruiting and the retention rates are running far ahead of expectations and hopes. I think it is a credit to both you and certainly to the Joint Chiefs of Staff, that this turnaround has been made in the last couple of years.

In your statement you mentioned multiyear contracts fully funded. Is this a correct statement? Unless you fully fund multiyear contracts, the effectiveness of them is negated considerably to a point at which they cannot be nearly as effective?

Secretary WEINBERGER. That is completely correct, Senator.

Senator JEPSEN. Can you give a figure as to what that fully funded multiyear contract is expected to yield? If we fully fund these now, it will cost, compared to the way we used to do it, somewhat less later on down the pike?

Secretary WEINBERGER. I have the full list of what we are trying to do this year. It includes the portion of the 1983 funds for these systems that were added to initiate the multiyear contracts; the 5-year savings from those items will be \$815 million.

The increase that is required to secure those savings is \$546 million. It is a matter of timing because you get savings that you would not otherwise have by putting the authority you would have to put in, anyway, all at once. That is why the 1983 authority jumps. That is why I indicated in my statement that if things work out as we are planning—and I believe they will—the increase in authority for 1984 will be very much smaller.

Senator JEPSEN. Deputy Secretary Carlucci has listed increased competition as one of his famous initiatives to improve the defense acquisition process. Many experts have stated that significant savings could result if competition is introduced early in the life of the program, even though the initial cost might be higher.

What steps are being taken now to insure competition through the life of the new Army program?

Secretary WEINBERGER. We are trying to get competition at every level of contracting and every place we can. We believe if we have a number of people bidding, and that we will have ultimately lower prices. We have too large a number of situations in which sole source is not used as a matter of choice but is only used because that is all that is available.

One of the first things we think can be done—indeed Congress has already authorized—is the multiyear procurement. I have to say that I think a good part of the fact that we have so many situations in which there is only one bidder or only one supplier arise from the fact that the United States has been viewed as not a very good customer, not a very reliable customer, in the past.

To the extent that we can have multiyear procurement, we need some kind of realistic cancellation cost, if possible, should the program be canceled. There is also the point you made in the beginning—asking for the full realistic funding in the beginning and getting that authorized so that the companies will know that there is indeed going to be a procurement of that size over that number of years and will get geared up to do it. I think all of these things, plus the other administration initiatives outside this Department

to encourage more investment, can encourage more people to go into the business and we urgently need it.

The industrial defense base has eroded to a worrisome extent. We are trying to revive it. We would prefer competitive bidding in every situation and we are trying to get it in more situations.

Senator JEPSEN. What second-source initiatives had you wanted to pursue that were rejected due to resource constraint?

Secretary WEINBERGER. You mean the structural framework, like authorizing multiyear procurement?

Senator JEPSEN. Did you have any specific ones?

Secretary WEINBERGER. The Congress is very good about giving us most of the procedural structural changes that we needed. We have multiyear procurement initiatives for about 15 or 18 different systems this year which result in the savings that I mentioned a moment ago.

I don't know of any specific situation which resource constraints have prohibited our going to multiyear procurement.

On the other hand, I would say Congress has been very generous in authorizing the procedures that will enable us to do it.

Senator JEPSEN. Mr. Secretary, last year you laid great stress on readiness in the formulation of the fiscal year 1982 authorization request. Should readiness be given the same priority in the 1983 request, and if so, how much in terms of dollar outlays for improved readiness in 1983, and how does that compare with 1982?

Secretary WEINBERGER. To answer the first part of your question, it is clearly yes. We said in the statement we do feel that making more ready the forces that we now have is the most important thing we can do initially. We have devoted a considerable portion of the resources of this budget to that kind of improvement.

I will have to get the figures for you, because I don't want to give you an incorrect allocation, but there is a substantially improved, increased effort for readiness and you can see it in the amount of additional ammunition we will have ready and the amount of additional training time, flight time that the pilots will be authorized, things of that kind.

I will get the figures for you.

Senator JEPSEN. Thank you.

[The information follows:]

FISCAL YEAR 1983 BUDGET OVERVIEW

Readiness is the ability of our forces, units, weapon systems, with appropriate equipments to achieve the mission for which they were designed (including the ability to deploy and employ without unacceptable delays). It depends on having the required quantities of equipment in the hands of the units on a day-to-day basis, and on having the required number of adequately trained people assigned with the necessary mix of grades and experience level and to ensure that people and machines can work together.

To meet our immediate personnel readiness needs and to ensure our continued reliance on the All Volunteer concept, we are committed to: (1) securing fair and adequate compensation for those now serving in our Military Services; (2) providing a predictable, stable, and easily understood military pay increase adjustment mechanism to sustain the appropriate relationship between Service compensation and the pay of the private citizens whom our armed forces protect; and (3) providing living and working conditions that are attractive enough to encourage continued military service by trained and experienced men and women.

The major readiness increases in our budget are in the Operations and Maintenance and Military Personnel titles. Our fiscal year 1983 Military Personnel title is

up \$1.6 billion in real terms, and the O&M title has real increases of \$4.2 billion in fiscal year 1983.

Senator JEPSEN. With regard to the question that Senator Byrd had, I would also like a copy of the various costs, retirement costs.

Secretary WEINBERGER. Personnel costs?

Senator JEPSEN. Yes.

Chairman TOWER. That will be provided to the full committee, Senator, so that everyone will have access.

Senator JEPSEN. During my discussion with Dr. Korb this morning, they were talking about what I call equalization. I hope that word is used more than "reductions". We need all the help we can get when we talk about getting at retirement costs, so that those retired in years passed will not be getting more than those who retire presently. It is coming out now as reduction. Those of us have a hard enough time discussing things that are actually happening without asking for brickbats.

General Jones, I don't know whether this will be classified too high for this open session or not, but there have been recent reports in the press that the Soviet Union may have shipped the advanced MIG-27 ground attack aircraft to Cuba. If this is so, it could be in violation of the Soviet agreement not to station offensive weapons in Cuba. I have some more comments but there is no need to make them if it is not so.

General JONES. To the best of our information, the Soviets have introduced some additional MIG-23's. The Cubans already have MIG-23's, one squadron introduced in 1978. We have received evidence of additional MIG-23's there.

Senator JEPSEN. You do not see MIG-27s?

General JONES. The MIG-23 and MIG-27 are very similar.

Senator JEPSEN. Does the MIG-23 have the ability to carry air-to-surface missiles as well as smart bombs?

General JONES. [Deleted.]

Senator JEPSEN. Has this had any effect on our strategic planning?

General JONES. [Deleted.] the fact that the Soviets delivered more military equipment to Cuba in 1981 than at any time since the Cuban missile crisis—a massive buildup—with a lot of that equipment being transshipped [deleted.] does impact on our strategy and our needs.

Senator JEPSEN. Thank you, Mr. Secretary, and General Jones. Thank you, Mr. Chairman.

Chairman TOWER. Senator Nunn?

Senator NUNN. Thank you, Mr. Chairman.

PEACETIME REGISTRATION

Mr. Secretary, first I want to congratulate you for undertaking a thorough review that you obviously did on peacetime registration, since you made that commitment last year. I know at that time you probably were not fully aware of all the advantages of it, but you certainly did undertake that. I don't know the details of who recommended what but the final outcome was that the President did make a difficult but, I think, a very, very courageous decision to continue that registration which I believe is very important.

Secretary WEINBERGER. Thank you.

Senator JEPSEN. Would the Senator yield?

Senator NUNN. Yes.

Senator JEPSEN. Thank you for bringing that up. I was remiss in not mentioning that.

I am aware that there was a great deal of time and effort spent on the actual development of that report for the personal review of the President of the United States. He did, in fact, make that personal review and he did, in fact, make the decision even to the extent of laboring with some staff on the opposite side of the fence, but the work that was done by the Secretary and your department and Dr. Korb was outstanding.

The President of the United States made a decision based on those facts presented to him which was right on target. I congratulate you and Dr. Korb on that.

Senator NUNN. I hope we won't have to climb that mountain again.

I don't know whose jurisdiction it is to do the advertising to young people, but we have gone through a year's period of time where young people have been uncertain about the future of registration. I would hope that we would do everything possible to encourage them and to alert them not only to their duty to register but also to the importance of what they can contribute to national security by taking that simple step.

It is awfully important for the young people to realize what they are doing is important for the Nation's security. If they do realize that, I believe we will get a higher compliance record.

Secretary WEINBERGER. I agree. It is the Selective Service responsibility. We have worked with them. There is no doubt a lot of confusion and uncertainty. It is the confusion that gave rise to a lot of nonregistration.

The President wisely gave a grace period. I would hope now the publicity you speak of and notification will be made. I think that the savings in time which registration can produce on mobilization is a very important contribution.

Senator NUNN. Of course, General Jones, I again thank you for your consistent leadership in this area for a long time.

I also want to commend you, General Jones, for raising the issue of the possible improvement in the operation of the Joint Chiefs of Staff. I don't know what the answers are, but I do believe that you have diagnosed the problem very well. I have been convinced for a long time that this had to be a top priority. You have started the dialog today and I am sure we will get details as we go along. I would hope at some point we will have a hearing specifically on this subject and go into great detail, because I know the Secretary of Defense needs the very best advice he can get on a joint basis. I believe the institution is at fault, not the individuals.

I believe we have some superb individuals. I believe the institution can be greatly strengthened.

Chairman TOWER. It is the intention of the chairman to hold a full committee hearing on the subject.

Senator NUNN. Thank you, Mr. Chairman.

I would like to ask a few questions and then I have some for the record.

ESTIMATED DEFENSE OUTLAYS FOR 1982

Mr. Secretary, last year the Congressional Budget Office estimated defense outlays for 1982 will exceed the administration's estimates by \$5 billion. You and I have some dialog on that. Actual outlays for the first quarter of 1982 are 20 percent higher than for the first quarter of 1981. This growth exceeds even the CBO estimate. It greatly exceeds the administration's estimate. Of course, this is just one quarter. It raises the question, particularly as we try to struggle with budget deficits. Are you still confident that the Department of Defense will be able to manage defense outlays so that the outlay ceilings imposed by the President on the Department of Defense last October can be met.

Secretary WEINBERGER. Yes, sir, we are. We are running with a figure of \$182.8 billion. The first quarter was 24.1 percent of the annual estimate, so we are at this point in the fiscal year on target. It is a vital matter and it can get out of hand very quickly. We certainly want to keep a very close eye on it.

At the moment we believe we are right on target. What tends to happen as you go into a recession, particularly a deep recession—and I hope we will be coming out of this soon—is that the extra capacity in the industry ends up chunking out items a lot faster than we previously anticipated.

They also tend to build earlier than otherwise. That tends to cause some problems. The management of the outlays is a terribly important part of the whole business. We are encouraged that we are on target at the moment, but we are not going to give up the careful management of it.

Senator NUNN. I would like to compare your targets with the CBO's targets because they were over your estimate. They now say their first quarter was underestimated. Could I get for the record your targets as they exist now for each quarter and how we stand for the record?

Secretary WEINBERGER. Yes. We are showing 182.8 for the year. We will get the quarterly for you. The first quarter we are 24.1 percent of the total.

Senator NUNN. I guess the question really is for the record:

If you are 24.1 percent of the total, simply multiplying that by 4 indicates you are on target. If your target for the first quarter is 20 percent and you are 24, that is another matter.

The real question for the record is what percent did you anticipate for the first quarter of the overall total? If you can furnish that.

[The information follows:]

The percent of overall spending estimated at the beginning of fiscal year 1982 for the first quarter of the year was 23.9 percent. It should be noted that this projection was prepared before congressional action was completed on the fiscal year 1982 budget. It excludes consideration of the fiscal year 1982 program supplementals reflected in the fiscal year 1983 President's budget.

NEW GLOBAL STRATEGY

Senator NUNN. You also raised questions about strategy which I think we have not spent nearly enough time thinking about, and that gets to General Jones' recommendations about changing the

Joint Chiefs in some respects. You stated in your fiscal year 1982 posture statement that the United States must develop a new global approach to strategy to deal with present day-to-day realities. What have you done to develop this new global strategy; has it been developed and how is it manifested in the 5-year defense program and the 1983 budget?

Secretary WEINBERGER. It is an evolving thing. Basically, it is founded on the concept that we can no longer rely on the idea that there would be a short conventional war period which would escalate rapidly to nuclear war because we don't have that degree of nuclear superiority that we had all through the 1950's and 1960's and even into the 1970's.

It is based on the idea that we may well have a situation in which the Soviets would either make what might be called a diversionary attack or feint a real attack that was small in size, and then would launch an assault against the central front in Europe and, therefore, we would have to be engaged in a number of different places at once.

This has led us to feel that we should have more mobility, more airlift, that we have to improve and increase naval strength substantially and that we have to improve and strengthen our ability to carry on conventional war for a longer period of time than we had previously thought. That is the basis of the strategic concept that we are using.

General Jones may want to elaborate on those. That is essentially what we are trying to do.

General JONES. We are trying to make sure that we have the capability to sustain conflict almost anywhere in the world. That means increased sustainability in Europe, but also an ability to redirect those resources; the ability to sustain forces in Southwest Asia, and greater mobility to project forces.

The central feature is a much increased power projection capability to any place in the world and the ability to sustain that power once there.

Southwest Asia tends to be the most difficult case because it is so far away and we have so few facilities. If we can meet that requirement, then we are better able to meet other requirements around the world. So the conventional strategy, as the Secretary indicated, is to try to make sure we have proper balance with the Soviet Union so they are always faced with the threat of escalation.

Senator NUNN. Thank you.

CURRENT STRATEGY AND CURRENT RESOURCE ALLOCATION

Mr. Secretary, a few weeks ago one of the unfortunate leaks that came out related to the Defense Resources Board estimate of a \$750 billion shortfall representing, as I understand it, the gap between current strategy and current resource allocation. Could you tell us who is on that Defense Resource Board?

Secretary WEINBERGER. Let me say at the beginning, Senator, that one of the unfortunate aspects of the leak we referred to is the incorrect impression you had of what came out. It was not a finding of the Defense Resources Board; it was a simple paper that was presented to the Board along with other things that indicated that

if there was no fiscal constraint at all, and if particular forms of strategy were adopted, particular additions to the strength we had would be very desirable, and when you total all that up it came out to \$750 billion more than we are going to ask for or going to spend because we do have constraints.

We live in a real world. People working on that are specifically operating on these assumptions that there aren't these constraints. These are the unconstrained totals.

Senator NUNN. Is this a wish list?

Secretary WEINBERGER. That is what I described it as. We don't have evidence that all these things are wished for. These are things that are listed as additions to the strength that would assure the ability to do what General Jones just said—to fight anywhere in the world at any time and have high degrees of success.

[Deleted.]

Senator NUNN. Who prepared it?

Secretary WEINBERGER. I think it was a composite preparation. I don't know who did the final preparation. It came from the various services. Then estimates were put on these amounts and pretty soon the estimate totaled that figure.

What we are doing is staying with the outlay figures that the President has given us for 5 or 6 years, so we have no intention whatever of using that. That was not a yardstick but a basis against which to help us with priorities and things of that kind, and to help us on allocation for things that we are going to recommend.

[Deleted.]

We have, and an investigation is just about complete.

Senator NUNN. I share your frustration over leaks. It has been going on for a long time. I wish you success.

Chairman TOWER. Senator Nunn, your time is up.

Senator NUNN. Thank you.

Chairman TOWER. Senator Quayle?

Senator QUAYLE. Thank you, Mr. Chairman.

I understand, General Jones, you announced you will be retiring this June?

Secretary WEINBERGER. Unfortunately the statutes announced that for him.

Senator QUAYLE. I will say I appreciate all you have done for me. Having gotten to know you, I wish you well in the future. You have been an influential force in the past, and I hope you will continue.

General JONES. Thank you, Senator.

CHEMICAL WARFARE

Senator QUAYLE. My first question concerns chemical warfare.

Mr. Secretary, what are the dollars that you have requested this year for the binary program? Also, how much of an increase is that going to be over last year?

Secretary WEINBERGER. We will have a submission on the binary program in which we request \$104 million. That includes costs for research and development, procurement of equipment, munitions, and construction. That, I might hasten to add, is all kept in the United States and will not be deployed any place without the specific consent of the countries concerned in the event of need.

I might also say we feel we need the program because the Soviets, we know, have very substantial supplies and capability.

We have dismantled ours. We think that is a dangerous position to be in. We are signatories to "no first use" and we have every intention, and full intention in every way, of maintaining that.

We have some evidence that the Soviets have not; therefore, this adds considerable urgency to our feeling that we should acquire that capability this year.

Senator QUAYLE. Is this \$104 million the total binary program?

Secretary WEINBERGER. It is the total binary program.

Senator QUAYLE. What kind of increase is that over last year?

Secretary WEINBERGER. That I will have to get for you. I don't remember whether we had binary funds to any great extent in the 1982 budget, or not. We had about \$36 million I am told.

Senator QUAYLE. Thirty-six million dollars in the last budget?

Secretary WEINBERGER. Yes.

Senator QUAYLE. You are now requesting \$104 million?

Secretary WEINBERGER. Yes, sir, \$104.8 million through fiscal year 1984.

Senator QUAYLE. This is for the offensive rather than defensive capability, right?

Secretary WEINBERGER. That is right. Then there are a number of things that we do to improve the ability to operate in a chemically contaminated atmospheric environment, all the decontaminations, protective clothing, and masks.

Senator QUAYLE. Are you saying binaries will not be stored in Western Europe without their consent?

Secretary WEINBERGER. The binaries are inert and not dangerous until they are combined as they are used. The storage of the uncombined inert elements will be in the United States.

Senator QUAYLE. Basically, our offensive chemical capability will be increased by about five times, from \$20 million?

Secretary WEINBERGER. Yes. Although I am now informed that the proper funding for fiscal year 1982 is \$36 million, the fiscal year 1983 increase will continue the R. & D. at about the same level, but includes funds to establish a production capability and for production which will ultimately provide a much greater improvement in our retaliatory capability.

Senator QUAYLE. I am very concerned about this whole issue, from a different perspective. One, I have had the briefings [deleted] that show that in fact chemical warfare has been going on in Kampuchea and Afghanistan; there is no doubt it has been going on. We have good circumstantial evidence that such usage is directly attributable to the Soviet Union. I am disturbed that we are not doing enough to bring this to the attention of our allies to show what is going on, to really dramatize the implications of this.

I think the ABC documentary was a very good documentary of what is going on in this area. It seems to me that we have failed in a way to grasp the significance of the issue.

Now, I am not convinced that the right response to this is to increase our offensive capability by five times if we are really going to have a concerted policy to deter chemical warfare.

Secretary WEINBERGER. Senator, we have quite a dilemma there [deleted]. First of all, we do need the capability. We have to regain the capability we once had. We do not intend to use it first but to deter attacks on us once the Soviets acquire and deploy to a number of their forward-based units and others, the capability to initiate chemical warfare of this kind.

We think if we can acquire a capability again that we voluntarily took down the 1970's, we will have a greater deterrent effect. We think it is vital that we do that. [Deleted.]

We have to reacquire the capability. We believe that the increment we are asking this year is a suitable response to the known Soviet capability.

PRIORITY ON OFFENSIVE CAPABILITY

Senator QUAYLE. Why the priority on offensive capability? Is it because in the past we have not done anything, or is it really to meet the challenge by the Soviets?

Secretary WEINBERGER. It is to meet and, we hope, to deter the challenge of the Soviets. We dismantled our capacity before. If there is a very high Soviet capability, which we know there is, against a zero capability on our side, then we invite an alternative to nuclear warfare or something of that kind.

I think the way we can best maintain the deterrence is to reacquire some offensive capability. That is what we are trying to do this year.

General JONES. We have spent hundreds of millions of dollars over the years on defensive equipment, but we have not met all of our defensive requirements. We have spent far more defensively in the last 5 years than we have offensively.

Senator QUAYLE. What would be your reaction to a zero-based option on a chemical warfare proposal, like we have done in the IMF area?

Secretary WEINBERGER. We thought we had one, but the Soviets don't seem to think so.

Senator QUAYLE. Since they have not complied, you feel that our best reaction is to go ahead and build up our capability?

Secretary WEINBERGER. Yes.

Senator QUAYLE. What would be our response if any kind of chemical warfare were conducted by the Soviet Union in Western Europe?

Secretary WEINBERGER. I don't want to speculate on a lot of hypotheticals, but we would take the action we feel essential at that point to sustain the position that we had. If we don't have the capability, we don't have the number of options open that we think the troops who are committed to that kind of action should have.

Senator QUAYLE. Let me just ask an overall question: Can you give us guidance and assistance on trying to sell the overall defense budget back home in Indiana? I think we will have an increase of about \$35 billion in authorizations. While we are calling for further reductions in nondiscretionary accounts and entitlements. It looks to me like you should try to look ahead to the big congressional debate this year, which will be on defense.

I am sure at some point we will have to have personal involvement with the President, not particularly this committee but the Budget Committee, where the true bite may take place.

What kind of statements and appeals should we use in selling the budget?

Secretary WEINBERGER. First of all, I think the President will be personally involved. The chairman very wisely talked to him about

that. I know his inclinations and all his positions are strongly in that direction, all of his natural feelings about these matters. That is why we are submitting a budget of this kind because that requires specific budget approval.

As far as persuasion and education are concerned, I think we have to do two or three things: We have to bring home to the American people the nature, the size, and rapidity with which the Soviet threat has grown; the dangerous character of it, and the situation that we have now. This is the only way, with a threat of this magnitude, that we can hope to regain in time the strength that we have to have to deter attack. We are not sure that it will be in time. That is the nightmare that drives us all in the Department.

We have had time for mobilization in previous wars. We barely had time in World War II. We don't know what time we will have again.

The other part that is hard to get across is that if we are totally successful—I mentioned this before—we don't use any of it whatever; none of these very expensive things will be used if we are completely successful.

I understand it is not only a problem in Indiana but also a problem everywhere else in the country, but it is a fact. If we are to be successful, it will be because we have these expensive things. That is the paradox we do have to get across. I think we have to emphasize the nature of the threat and it is a very real one. It is not a propaganda thing at all. It is a real one and growing right now.

SS-20's

We have talked about the SS-20's. During the fall I used to talk about 250 SS-20's deployed to target Western Europe and Asia. It is [deleted] now; it is growing all the time these negotiations are going on in Geneva. This is duplicated all over, in submarines, aircraft, infantry divisions, tanks, and everything else. It is not cheap war equipment; it is a very good equipment. They are perfectly willing to cripple their domestic economy and make miserable lives for everybody at home and keep on doing it year after year.

We have all those factors. We do have the added factor that we lost a lot of momentum in the previous decades. We have to reacquire that. It is a long, slow, and very expensive process.

I would simply hope that by sufficient reiteration of those undoubted facts in all kinds of meetings, home meetings, small gatherings, all of the ways in which you so successfully campaigned, that you can continue to make this point across the State.

As I said, I do a great deal more than I would like, to have to in trying to persuade people through all the various media that what we want to do is vital. We have a lot to counteract because there are a great many people who are talking about the fact that the threat is all a sham and you can take care of the deficit by chopping up defense again.

I am convinced that would be very dangerous, not only because we would not regain our strength, but also because we would have the Soviets very well aware that America simply cannot put together the resolve and the will to regain the strength that it needs.

Chairman TOWER. Senator Quayle, your time is up.

Senator QUAYLE. I have questions I would like to submit for the record.

LATENT ISOLATIONISM

General JONES. Could I have 15 seconds on the question?

There is one problem that concerns me; that is, latent isolationism in the country, particularly the Midwest. I am a native of the Midwest. I am concerned that our own people are saying that because the European don't do enough, we should pull our troops out and not defend the Europeans.

We are in Europe for the defense of the United States. Regardless of what the Europeans do, we need to be there and we need to improve our capability to fight there. I see a growing and dangerous trend that since our allies are not doing enough, we should withdraw.

Senator QUAYLE. Thank you, Mr. Secretary, for your leadership in trying to convince the allies to not only share the burden of defense but also to point out the reality of the threat from the Soviet Union. You have done a tremendous job. I hope you will continue to bring that pressure on our allies and we will try to muster the support back home.

Chairman TOWER. Senator Exon?

Senator EXON. Thank you, Mr. Chairman. I have a series of questions I would like to submit for the record, if there is no objection.

Chairman TOWER. Without objection, it is so ordered.

Senator EXON. Mr. Secretary and General, I want to add my voice to the complementary remarks which have been made about your opening presentations. I thought they were most excellent and to the point.

AMMUNITION BUILDUP

I was particularly pleased about several things to which you referred; specific things I have been interested in. For example, enhancement of the ammunition buildup, which I think is critically necessary and the SL-7's and other naval enhancements you outlined.

You are opting for the C-5 versus the C-17, or C-X, which I compliment you on, and more flying hours for our aviators which I have thought has been a critical need. Certainly the tanks Bradley fighting vehicles which you emphasized are all very important in my opinion and which will tend to improve our conventional forces.

I also want, though, to echo what was stated, I think by the chairman and followed up by Senator Jackson and others, and just referred to by my friend from Indiana—the budget.

You emphasize this is a minimum budget. You have not put any "fat" in it, so that we can cut it down; and if we do cut this down, I suspect you will have to eliminate some critical programs which you and the Joint Chiefs and others feel are critically necessary?

Secretary WEINBERGER. Yes, sir.

Senator EXON. I have no concern, Mr. Secretary, about the dedication to this budget, the fight that will be waged on behalf of the

budget on your part, nor do I have any concerns about the effort that the President of the United States will put forth.

I do have some concern about Mr. Stockman. I would simply like to say that Mr. Stockman's on and off the record comments have done more to harm, in my opinion, the military budget than anything else.

Is Mr. Stockman for this minimum budget and will he so state?

BUDGET SUPPORT FROM ADMINISTRATION

Secretary WEINBERGER. Yes, he has agreed it should be presented to the Congress. I am sure he will so state. I would be extraordinarily disappointed if he didn't, because this is the President's budget that we are presenting. It has been discussed and reviewed and considered and reconsidered and it is before you as the President's budget. It is the one that I am supporting without the slightest equivocation; indeed I had a great deal to do with the preparation of it.

The administration is behind it. I have to assume, and I do assume, that includes all its members. I think everyone would be very interested to find out if that is indeed not the case.

So far as I know, it is completely supported by the administration.

Senator EXON. I am delighted to hear that. I hope it works out that way.

Having said that, let me get into some of the concerns I have about the budget in general and the strategic window of vulnerability we are concerned about. I do not see anything in this budget which will close that window in the immediate future.

STRATEGIC WINDOW OF VULNERABILITY

In that regard, I would like to call your attention to a statement made by the Secretary of the Air Force early last month. On January 15 I sent him a letter inquiring about this, and copied you. That was with regard to the announcement by the Secretary of the Air Force that indeed, starting in October of this year, and for every month thereafter, we were going to dismantle or pull out of the ground our Titan missiles and cover their silos.

With the window of vulnerability we have, with the several statements I have heard you and General Jones make here this morning, what sense does it make, and how do you, if you do, defend the decision to unilaterally start pulling out Titans at a time when we have nothing to replace them?

Secretary WEINBERGER. Senator, the primary factors in that decision was the fact of their age, the fact that they have very high annual operation and support costs, and that there are potentially serious public safety problems.

Those were the principal factors that went into the decision, that was perhaps made a few years earlier than might otherwise have been the case. I think the loss of warheads that you are referring to will be for a comparatively short period. In view of the age, and the relative inaccuracy and ineffectiveness of the Titan, I think this is a temporary reduction that will obviously be more than made up many times over when the M-X comes on line. When the

first ones come off the production line, and we will, of course, have the strength of our Minuteman force.

With Titan, we do have very high operating costs for the results achieved, although obviously there are different ways of measuring that, and we do have safety problems with a system that is as old as this.

Those are the things that led to the conclusion that we should take these out now.

Senator EXON. Mr. Secretary, you are generally so responsive; you are generally so considerate of other people; you are generally so sound; I just don't buy the answer you just gave at all. I think you know my high respect for you, but I don't agree with you.

The operating costs of the Titan missile are minuscule, are they not, from the standpoint of what we are doing to develop the MX to replace it?

Granted that while we will have more proficiency from the 10-warhead MX when it goes in, isn't it true that we will only save about \$165 million a year by taking these Titans out of service?

Secretary WEINBERGER. I think that is roughly what we would have spent in fiscal year 1983 if we had not decided to begin retirements Senator, the savings we have made are made up of hundreds of minuscule items; that is the way we try to achieve as many savings as we can. It is a weighing process. If we are totally unconstrained on the fiscal side, I am not at all sure whether we would still want to keep the Titans in service because the effect of a serious accident would be such not only for its immediate effect and the injuries that it might cause, but also the effect of public opinion, which is the foundation of this whole thing.

We would expect to save about half of that amount in fiscal year 1983 by the deactivation but that is one of many items that leads to the savings that we referred to earlier.

I just worry about a system that is that old and at the same time is that much more costly than others to maintain. Yes, against the \$215 billion it is a minuscule amount but the savings we get are a series of amounts of that kind. There aren't any very large, enormous savings to be had in this budget.

Senator EXON. The only thing I would say is that with their [deleted] warheads and the threat that must be to the Soviet planners, it seems "penny wise and pound foolish" to me.

From the standpoint of our attempting to negotiate now with the Soviets regarding arms reductions in general and ICBMs in particular, were Mr. Rostow and General Rowney consulted on this decision to unilaterally do away with the Titans at the same time that the Soviet Union is building up each and every week which you just testified to? What do those people who are involved in arms negotiations with the Soviet Union think of that decision?

Secretary WEINBERGER. This decision was made sometime ago. General Rowney and General Rostow have not been here all that long. I can't answer whether they were formally, specifically consulted. I will find out about it.

You spoke of the threat to the Soviets if they remain in the ground and that it is an added threat. I guess I have to say—without being facetious that they are somewhat of a threat to the

people of the United States and that is the thing that does worry us.

Senator EXON. Mr. Secretary, the statement you just made leads me to my next question. Most of the military experts I have talked to do not share your concern that these are that much of a threat to the people of the United States. I would just like to ask at this time whether General Allen concurs that we should be dismantling these Titans unilaterally; does General Allen concur in that decision and does anyone else in the higher echelon ranks of the Air Force agree with this decision?

General JONES. Senator Exon, you will have to ask General Allen. I think he does.

Senator EXON. You think he does?

General JONES. I think he supports this action because it was in the Air Force program submitted to the Secretary of Defense. But you will have to ask General Allen.

There are very difficult choices to be made, even among the strategic systems. The Titan does have a [deleted] it carries our largest ICBM warhead. On the other hand, it is not accurate, so it is an area-target-type weapon. Some call it a city-buster, although we would apply it against some military targets. It also has the problems of vulnerability and safety that the Secretary has mentioned. Since it will take a long time to phaseout, extending until 1987—we will have most of them for quite a period of time.

Therefore, when you look at where to find the extra millions of dollars each year to continue to maintain the Titan, I think all of us will say although it is at the margin—that we would phase out the Titans rather than take those millions out of some other part of the Air Force budget; but it is a close call.

Senator EXON. How do you call it, General?

General JONES. I call it close. I support the decision of phasing out the 52 Titans. They are vulnerable; they are less hardened than Minuteman. They are not accurate. They have maintenance problems. They require a lot of manpower. When I compare what they give us with what we have to give up in dollars, I support the decision.

Secretary WEINBERGER. There will be approximately 40 MX's ready to go by 1987. There is not a complete crossover but we will be replacing the Titans with MX's, not hole for hole or anything like that, but in total capability.

Senator HUMPHREY [presiding]. Senator Exon, your time has expired.

Senator EXON. Thank you.

Senator HUMPHREY. Senator Levin?

Senator LEVIN. Thank you, Mr. Chairman.

DOD COMPETITION

I understand that Senator Jepsen asked a question about competition. As you know, I am very much interested in competition. I had an amendment, along with Senator Cohen, last year which would have increased competition in Defense Department procurement. We worked out changes in that amendment in order to

obtain DOD's acquiescence and support in the Senate. We added that to the authorization bill on the Senate side.

Will you support that amendment this year?

Secretary WEINBERGER. I have not seen the specific wording of it, but what we can do to improve competition we certainly want to do.

Senator LEVIN. You are not familiar with that amendment?

Secretary WEINBERGER. Not at the moment, no.

Senator LEVIN. Let me just mention to you for the record that after we added that amendment on the Senate side, we found ourselves in conference with the House and there found the House quoting the Pentagon's opposition to the very amendment for which we had obtained Pentagon's acquiescence. I didn't think it was appropriate for the Pentagon to take that position once we had amended the amendment in order to make it palatable to the Pentagon. I think it was a mistake and I would expect that would not be repeated in the future. If the Pentagon opposes something, they should let us know up front.

Senator Byrd asked you a question about projected savings. I understand you are going to document those \$5 billion for the record?

Secretary WEINBERGER. Yes, sir.

Senator LEVIN. Will you give us a breakdown, program element by program element? Will you do that?

Secretary WEINBERGER. All right. We will certainly do it as close to your specifications as we possibly can. A lot of those savings come from ways of doing programs less expensively, so there may not be all that many program eliminations, although there are some. We were just talking about one with Senator Exon. Yes, we will try to get it the way you want it.

Senator LEVIN. Will that be the next 5 years, the \$20 billion?

Secretary WEINBERGER. Yes. The savings of \$38 billion that we identified run through 1986.

Senator LEVIN. The \$20 billion was wrong. I misspoke. The 5-year savings, if you could give us that.

Secretary WEINBERGER. Yes.

Senator LEVIN. We also have seen reports that DOD has terminated 20 new R. & D. programs that might have gone into production. Is there any truth to that report?

Secretary WEINBERGER. I am not sure of the precise number, but we have looked at the numbers and, again, as General Jones said a moment ago, there are a lot of hard choices and close questions when we are under constraints. We have terminated a number. I think that is pretty close to being right.

Senator LEVIN. Will you give us a list for the record?

Secretary WEINBERGER. Yes.

Senator LEVIN. I am not being critical; I am just seeking information on that. I might be critical after I get the information.

[The information follows:]

ECONOMIES AND EFFICIENCIES

The Defense Department has made significant progress toward savings and efficiencies. The figures cited and also included in the January 25, 1982 letter to Chairman Tower from Deputy Secretary Carlucci were, in fact, preliminary figures based on data received at that time. The Department has now completed a review of sav-

ings data reported by all DOD components and savings figures are actually higher than previously cited.

The Department is providing a detailed item-by-item list of all areas where those savings-cost avoidances have been accomplished or are programed. The data covers the targeted savings from fiscal year 1981-fiscal year 1987 as requested.

ECONOMIES AND EFFICIENCIES

[TOA in millions of dollars]

	Fiscal years—							Total
	1981	1982	1983	1984	1985	1986	1981 to 1986 subtotal	
Pay adjustments:								
Civilian pay cap.....		1,774.0	2,879.0	3,804.0	4,553.0	5,155.0	18,165.0	23,839.0
Retired pay COLA.....	51.0	307.0	255.0	208.0	213.0	191.0	1,225.0	1,421.0
Military retirement system reform.....			858.0	1,073.0	1,169.0	1,203.0	4,303.0	5,537.0
Subtotal.....	51.0	2,081.0	3,992.0	5,085.0	5,935.0	6,549.0	23,693.0	30,797.0
Acquisition.....	167.8	1,338.7	2,363.6	2,786.7	2,119.5	3,303.2	12,079.5	13,779.4
Operations.....	260.3	940.7	949.5	1,151.8	1,128.9	1,180.2	5,611.4	6,853.1
Grand total.....	479.1	4,360.4	7,305.1	9,023.5	9,183.4	11,032.4	41,383.9	51,429.5

TOA MILLIONS OF DOLLARS SAVED BY CATEGORY

Code	I. Acquisition	Fiscal years—							Total
		1981	1982	1983	1984	1985	1986	1987	
AA	A. Lower cost alternatives.....	118.4	147.6	69.0	133.2	261.5	332.1	343.6	1,405.4
AC	B. Increased competition.....		12.9	13.6	13.6	13.6	13.6	13.6	80.9
AE	C. Productivity enhancement.....	- 7.5	34.2	58.9	73.3	73.1	58.0	33.7	323.7
AL	D. Legislative reforms.....		69.2						69.2
AM	E. Multiyear contracting.....	15.0	20.5	125.1	218.6	197.6	238.9	264.4	1,080.1
AP	F. Economic production rates.....	29.2	470.1	578.1	442.1	298.0	459.2	.4	2,267.1
AX	G. Elimination/reduction of marginal programs/systems.....	12.4	292.3	1,103.9	1,420.2	1,130.7	1,400.6	847.4	6,207.5
AO	H. Other acquisition improvements.....	0.3	291.9	425.0	485.7	145.0	800.8	196.8	2,345.5
	Total acquisition.....	167.8	1,338.7	2,363.6	2,786.7	2,119.5	3,303.2	1,699.9	13,779.4

TOTAL OBLIGATIONAL AUTHORITY

[In millions of dollars saved]

Code: I. Acquisition initiatives	Appn.	Fiscal years—						Total
		1981	1982	1983	1984	1985	1986		1987
(AA) A. LOWER ACQUISITION ALTERNATIVES								
1. J-57 spare parts.....	APAF	98.6	86.9					185.5
2. Consultants/management services.....	MPAF	.8						.8
3. Boats and craft radios.....	OPN			0.5				.5
4. VTX.....	ROTEN		7.6	3.3	5.9	61.5	150.0	388.3
5. Sub ASW SOW.....	ROTEN			8.6	53.3	52.8		114.7
6. ITSS.....	ROTEN		10.4	16.8	59.6			86.8
7. HXM.....	ROTEN		3.8	13.1		92.9	134.7	386.9
8. U/S survey.....	ROTEN		10.3	16.4	5.8	18.3	6.1	56.9
9. Alternative payment plan (computer).....	OMDA		.1	2.1	.4	1.0	.7	5.0
10. Computer purchase.....	OMDA	7.4	7.4	7.4	7.4	7.4	7.4	51.8
11. Buy-out plan.....	OMDA		.8	.8	.8	.8	.8	4.8
12. A-4 ejection seat.....	OPN		20.3					20.3
13. F/A-18 GFE breakout.....	APN					26.8	32.4	91.5
14. Fuel price and storage.....	DSF	11.6						11.6
Subtotal.....		118.4	147.6	69.10	133.2	261.5	332.1	1,405.4
(AC) B. INCREASED COMPETITION								
1. Plug compatible mainframe (NSA).....	OMDA		.2	.2	.2	.2	.2	1.2
2. Commercial proc. docs. (DLA).....	DSF		9.4	9.4	9.4	9.4	9.4	56.4
3. EOQ purchases (DLA).....	DSF		1.8	2.0	2.0	2.0	2.0	11.8
4. Cross-reference screening (DLA).....	DSF		1.5	2.0	2.0	2.0	2.0	11.5
Subtotal.....			12.9	13.6	13.6	13.6	13.6	80.9
(AE) C. PRODUCTIVITY ENHANCEMENT								
1. Fast payback.....	OPAF	-4.2						-4.2
Capital investment.....	OMAF	2.7	2.9	2.9	2.9	2.9	2.9	20.1
	MPAF	.9	.9					1.8
2. Intrusion detection.....	OPAF	-7						-7
	OMAF	-2.4	3	5	.7	.7	.7	1.2
	MPAF		2	1.2	1.8	1.8	1.6	7.2

TOTAL OBLIGATIONAL AUTHORITY—Continued

[In millions of dollars saved]

Code: I. Acquisition initiatives	Appn.	Fiscal years—						Total
		1981	1982	1983	1984	1985	1986	1987
3. Numerical control equipment.....	OPAF	-1.7						-1.7
	OMAF							5.9
4. Advance word processing system.....	OPAF	-1.4						-1.4
	OMAF							1.7
	MPAF							.4
5. Transportation operational personal property standard system (TOPS).....	OPAF	-8						-8
	OMAF	.1						2.9
6. Productivity enhancement capital investment.....	OMN							178.4
	OMMC							9.3
	OMNR							1.8
	PWC							5.6
	ROTEN							.3
7. MK-46 mod proc.....	WPN							95.9
								33.7
Subtotal.....		-7.5	34.2	58.9	73.3	73.1	58.0	323.7
(AL) D. LEGISLATIVE REFORMS/IMPROVED ADMINISTRATION								
1. Davis-Bacon Act.....	MCN							30.3
	MCA							20.0
	MCAF							18.9
Subtotal.....			69.2					69.2
(AM) E. MULTITEAR CONTRACTING								
1. F-16 procurement.....	APAF							246.0
2. F-111 weapon navigation computer.....	APAF							9.9
3. AN/TRC-170 radio.....	APAF							18.7
4. AN/ALQ-136 radio jammer.....	APA							14.7
5. Blackhawk helicopter.....	APA							81.1
6. Multiple launch rocket.....	MPA							64.0
7. NATO seasparrow.....	OPN							37.2
8. A-6E procurement.....	APN							20.3
9. EA-68 procurement.....	APN							21.1

TOTAL OBLIGATIONAL AUTHORITY—Continued

[In millions of dollars saved]

Code: I. Acquisition initiatives	Appn.	Fiscal years—					Total
		1981	1982	1983	1984	1985	
10. C-2A.....	APN			16.3	5.5	7.1	58.4
11. CH-53E.....	APN				8.0	8.8	35.0
12. T-AO.....	SCN		7.7	12.5	46.3		66.5
13. Standard (SM-1).....	WPN					19.6	43.1
14. MK-46 NEARTIP.....	WPN				11.8	28.6	40.4
15. MULE.....	PMC			2.1	1.8	1.6	5.5
16. NAVSTAR GPS/10MDS.....	MPAF			.1	2.0	8.8	249.3
17. Defense meteorological satellite.....	MPAF					49.3	49.3
Subtotal.....		15.0	20.5	125.1	218.6	197.6	1,080.1
(AP) F. ECONOMIC PRODUCTION RATES							
1. AIM-9M production.....	MPAF		24.7	19.2	-22.4	16.7	74.2
2. E-3A procurement.....	APAF			78.0	81.0	18.2	159.0
3. Accelerate F-15 buy.....	APAF		30.0	12.6			42.6
4. RF-4 IR sensor.....	APAF			4.6	8.5		13.1
5. Defense satellite program acquisition.....	MPAF			32.0	32.0		64.0
6. AN/SSQ-47 sonobuoy.....	OPN				3.2		3.2
7. AN/BOQ-5.....	OPN				1.3		1.3
8. TSEC/KG-45.....	OPN				.1	.3	.8
9. SH-60B.....	APN					26.7	26.7
10. CH-53E.....	APN			5.0	5.0		10.0
11. Common ECM equipment.....	APN					18.5	18.5
12. Aircraft production rates.....	APAF		281.6	86.2			367.8
13. F-16 buy acceleration.....	APAF			199.0	197.0	159.0	747.0
14. Laser hellfire.....	MPA			11.2	44.3	62.1	189.8
15. Fighting vehicle systems.....	WTCV	4.5	40.4	99.9	73.6	17.6	236.0
16. DIVAD gun.....	WTCV		9.7	25.9	42.7	64.0	313.1
Subtotal.....		29.2	470.1	568.1	442.1	398.0	2,267.1
(AX) G. ELIMINATION/REDUCTION OF MARGINAL PROGRAMS/SYSTEMS							
1. E-4B procurement.....	APAF			278.7	290.8		569.5

TOTAL OBLIGATIONAL AUTHORITY—Continued

(In millions of dollars saved)

Code: I. Acquisition initiatives	Appl.	Fiscal years—					Total
		1981	1982	1983	1984	1985	
2. EC-135 airborne launch control systems.....	APAF		10.4	22.8			33.2
3. Titan missile phaseout.....	MPAF		31.1	30.1	23.4	21.3	138.6
4. KC-135.....	APAF				28.9	68.5	167.0
	RDTEAF			10.3	15.8	7.8	34.8
	APAF			.1	21.0	45.3	198.9
5. B-52 aircraft modification.....	RDTEAF			7.0	15.9	.1	23.0
	OMAF				.1	1.9	11.4
	MPAF				-1.0	-1.4	-2.7
6. Minuteman II.....	MPAF						378.0
7. Expendable drones.....	RDTEAF			5.1	8.5	166.0	24.7
	MPAF			26.7	58.1	52.2	223.7
	MCAF			.2	.1		.3
	OMAF			.1	.1	.2	.6
	MPAF			.8	.8	.8	3.2
	OPAF		6.6				6.6
8. Laser acquisition.....	RDTEA		13.0	13.0	19.0	17.0	136.0
9. 8-inch antiradiation projectile.....	OPN			14.6	15.9	14.2	71.1
10. AN/SPS-52 radar.....	OPN				7.9	7.8	31.5
11. Channel finder.....	OPN						54.9
12. Gun fire control systems.....	OPN			24.1	20.3		10.5
13. SMS ORDALTS: Tarter.....	OPN			42.6	6.0	26.0	57.9
14. 5-inch GP.....	OPN		16.5	29.8	86.8	112.8	516.7
15. Advanced base function components.....	OPN			10.0	15.0	48.0	168.0
16. Ship systems modifications.....	OPN			100.6	159.0		17.8
17. NOSS.....	RDTEA		46.1	87.9	115.7	105.7	442.0
18. Weaponizing proto.....	RDTEA		2.0	3.0	4.0	6.6	8.2
19. SOJS (THOR).....	RDTEA		10.1	22.3	35.6	61.0	76.3
20. CAML.....	RDTEA		1.7	5.7	6.7	5.6	.3
21. Super torch.....	RDTEA		3.2	3.2	3.5	3.6	3.5
22. VCX.....	RDTEA		32.6				32.6
23. TEWDS.....	RDTEA		8.8	6.9	19.8	24.4	31.2
24. MADAIR.....	RDTEA		2.3	3.7	4.0	4.1	4.3
25. Buried manhunt.....	RDTEA		1.8	5.0	6.6	6.4	7.9
							8.3

TOTAL OBLIGATIONAL AUTHORITY—Continued

(In millions of dollars saved)

Code: I. Acquisition initiatives	Appn.	Fiscal years—					Total
		1981	1982	1983	1984	1985	
26. IIR harpoon.....	ROTEN		38.6	39.8	32.1	23.1	3.8
27. HY 130 steel.....	ROTEN			1.8			1.8
28. MDM.....	ROTEN		.7	38.0	46.0	42.0	35.0
29. RECO.....	ROTEN			1.2	3.5	5.9	5.9
30. EMCARD.....	ROTEN		2.4	2.8	3.1	2.7	2.8
31. Mobile trk. range.....	ROTEN		6.5	4.1			10.6
32. DASS.....	ROTEN			3.7	1.4	1.3	.6
33. RTFX.....	ROTEN			17.0	19.0	36.1	37.8
34. Dual mini sins.....	ROTEN		1.0	.5			1.5
35. A-6/AWSACS.....	ROTEN			22.4	56.1	37.7	8.9
36. Linear chair.....	ROTEN		4.0	1.4			5.4
37. VLS ASROC.....	ROTEN		15.3	27.6	20.4	12.7	.5
38. AEPS II.....	ROTEN			2.7	3.2	3.3	3.6
39. Sealife.....	ROTEN		1.8	17.0	17.5	16.5	7.3
40. Finbrand.....	ROTEN			23.7	35.0	28.7	8.9
41. CH-46 ext. tank.....	ROTEN			1.2			1.2
42. POOTES.....	ROTEN		5.0	5.0			10.0
43. LINEAR ECM.....	ROTEN			7.9	3.7	3.1	14.7
44. Navy future comm.....	ROTEN		2.7	5.0	5.9	6.2	7.2
45. SIXT closed.....	ROTEDA		18.1	22.6	14.2	5.7	5.5
46. Navy OSHA.....	MCN			11.0	14.0	13.8	6.0
	OPN		3.5	3.0	3.0	3.0	3.0
	OMN		2.5	3.0	3.0	3.0	3.0
47. H-46 emergency egress mod.....	APN			1.7	1.9	.9	1.1
48. H-46 AAR mod.....	APN			1.4	3.6	5.8	5
49. H-46 ground prox modification.....	APN				5.6	5.8	3.6
50. S-3 ejection seat modification.....	APN					2.1	1.9
51. S-3 IFR probe modification.....	APN			1.7	1.7		3.4
52. S-3 TACANEXCAP modification.....	APN			1.2	2.2	1.1	5.6
53. P-3 TACNAV mod.....	APN			30.9	22.1	5.3	58.6
54. 25 mm gun pod mod.....	APN				8.9	33.6	107.1
55. ECM (ALR-45) mod.....	APN			36.3	36.8		73.1

TOTAL OBLIGATIONAL AUTHORITY—Continued

(In millions of dollars saved)

Code: I. Acquisition initiatives	Apn.	Fiscal years—					Total
		1981	1982	1983	1984	1985	
56. H-46 fuel tanks modification.....	APN					6.9	7.3
57. F-4, APR-43 modification.....	APN			4.8	6.0	1.1	.6
58. F-4, APR-118 modification.....	APN			3.5	2.4	.8	.4
59. A-6 (AWSACS).....	APN					4.9	107.7
60. P-3C (multi-signal/BITE).....	APN			5.7	5.6	4.9	3.9
Subtotal.....		12.4	292.3	1,103.9	1,420.2	1,130.7	1,400.6
							847.4
							6,207.5
(AO) H. OTHER ACQUISITION IMPROVEMENTS							
1. Service contract limitations.....	OMAF		4.4	4.7	4.9	5.1	5.3
2. Contract consolidation.....	OMAF	.1	.1	.1	.1	.1	.1
3. SH-2F contract.....	APN		38.7				
4. COMSEC mod. (NSA).....	Various			2.0	2.0	1.5	1.0
5. Engineering improvements (NSA).....	ROTEA			1.0	2.0	2.0	1.0
6. Joint electronics equip. (NSA).....	Various			10.0	25.5	25.5	25.5
7. DIA headquarters building.....	MCDA		1.0				
8. Pharmacy system (MIS).....	OMDA	.1					
9. CAPOC cardiology (MIS).....	OMDA	.1					
10. Compressed admin. leadtime.....	ASF			80.8	124.0		
	DSF			37.0	87.5		
	AFSF			20.0	50.0		
	PAA			26.9	45.0	81.0	99.0
	PMC			4.5	4.5		
	OPN			1.7	2.7		
11. Ammo acquisition efficiencies.....	APAF		4.2		2.1	9.0	16.0
12. E-3A procurement of radar as GFE.....	APAF			7.9	12.0	20.2	21.3
13. F-15 procurement of radar as GFE.....	APAF			.6	.7	.6	.4
14. E-3A procurement of consoles as GFE.....	APAF			11.1			
15. Delete TR-1 interior antenna.....	APAF						
16. Army stock fund.....	ASF		71.4				
17. CVN procurement.....	SCN				122.7		631.0
							753.7

TOTAL OBLIGATIONAL AUTHORITY—Continued

(In millions of dollars saved)

Code I. Acquisition initiatives	Fiscal year—					Total
	1981	1982	1983	1984	1985	
Appn.						
18. Reduced production leadtime		172.1	216.7			388.8
AFSF						
Subtotal	3	291.9	425.0	485.7	145.0	800.8
						196.8
						2,345.5

TOTAL OBLIGATIONAL AUTHORITY

(In millions of dollars saved by category)

Code II. Operations	Fiscal year—					Total
	1981	1982	1983	1984	1985	
OL A. Logistics improvements	62.7	31.9	99.3	177.7	133.0	164.9
OM B. Eliminate/reduce marginal equipment	1		11.7	11.7	11.8	11.9
OK C. Eliminate/reduce marginal programs/systems	37.6	206.1	140.9	137.6	148.2	139.9
OB D. Base realignments	34.3	77.9	56.0	65.1	65.2	65.3
OS E. Base support consolidations/reductions		51.2	47.5	50.7	50.8	50.9
OA F. Administrative overhead	78.3	407.7	368.5	489.6	410.0	419.9
OP G. Increased productivity	5.3	120.6	131.1	138.2	142.2	143.5
OO H. Other operations improvements	42.0	45.3	94.5	141.2	167.7	183.9
Total	260.3	940.7	949.5	1,151.8	1,128.9	1,180.2
						1,241.7
						6,853.1

TOTAL OBLIGATIONAL AUTHORITY

(In millions of dollars saved)

Code II. Operations	Fiscal year—					Total
	1981	1982	1983	1984	1985	
Appn.						
1. Consolidation of spares						
(OL) A. LOGISTICS IMPROVEMENTS						
OPAF	3.00					30.0
APAF	30.0					30.0

(In millions of dollars saved)

Code II. Operations	Appn.	Fiscal year—						Total	
		1981	1982	1983	1984	1985	1986		1987
2. F-100 engine component repair	OMAF		2.1	2.3	2.3	2.4	2.6	2.7	14.4
3. Organic repair AN/TPN-19	OMAF			3.6	3.7	4.0	4.3	4.6	20.2
4. Depot maint. I.F.	OMAF			56.0	29.0	31.0	33.0	35.0	184.0
5. Air res. log. support	OMAFR	2.7		3.2	3.4	3.6	3.8	3.9	23.4
6. Improved supply disciplines	OMA		17.0	17.0	17.0	17.0	17.0	17.0	102.0
7. Maint. cost reduction	OMA		10.0	10.0	10.0	10.0	10.0	10.0	60.0
8. Retail inventory	OMA			4.2	8.5	5.6	5.7	5.8	29.8
Management stockage	APA			1.0	1.5	1.0	1.0	.9	5.4
Policy (RIMSTOP)	MPA			.3	.5	.3	.4	.4	1.9
	OPA			1.2	2.3	1.6	1.7	1.8	8.6
	WTCV			.9	1.1	.6	.5	.5	3.6
9. Life cycle logistics	OMA								10.0
	APA								4.9
	MPA								4.9
	OPA								5.0
	WTCV								4.9
10. CARL program	OMN			2.5	2.6	2.7	2.9	3.0	13.7
11. Contrack	OMN		1.6	1.6	1.7	1.7	1.8	1.9	10.3
12. Transfer of consumable item management	OMN		.2	3.6	3.6	3.6	3.6	3.6	18.2
	OMA		3.1	12.3	12.3	12.3	12.3	12.3	64.6
	OMAF		1.5	8.8	8.8	8.8	8.8	8.8	45.5
	OMMC			.2	.2	.2	.2	.2	1.0
(DLA) OMDA			-6.4	-9.9	-9.9	-9.9	-9.9	-9.9	-55.9
13. Consolidation of property shipping office	OMA			2.1	.8	.8	.8	.8	5.3
	OMAF			2.0	.8	.8	.8	.8	5.2
14. Sealift cargo booking	OMN			1.0	1.0	1.0	1.0	1.0	5.0
	OMN			.3	.3	.3	.3	.3	1.5
	OMAF			.2	.2	.2	.2	.2	1.0
15. MSC/MTMC consolidation	OMA			2.0	2.0	2.0	2.0	2.0	8.0
	OMN			7.0	7.0	7.0	7.0	7.0	28.0
	OMAF			1.0	1.0	1.0	1.0	1.0	4.0

TOTAL OBLIGATIONAL AUTHORITY—Continued

[In millions of dollars saved]

Code II. Operations	Appn.	Fiscal year—					Total	
		1981	1982	1983	1984	1985		
16. Automated markings (LOGMARS)								
	OMA				7.7	14.3	20.8	63.6
	OMN				3.7	7.4	8.9	29.2
	OMAF			3	9.5	14.0	14.0	51.5
	OMMC				6.7	6.9	7.0	27.3
	OMDA				1	2	1.5	3.3
	OPA				5.4	5.5		16.3
	OPN				5.6	7.0		20.6
	OPAF				9.8	4.6		15.3
	PMC				8	1.1		2.8
	PDA				3.8	3.7		11.3
Subtotal		62.7	31.9	99.3	117.7	133.0	164.9	807.0
(OM) B. ELIMINATE/REDUCE MARGINAL EQUIPMENT								
1. Furniture	OMN			1.7	1.7	1.8	1.9	9.1
2. Ammo demil	OMA			10.0	10.0	10.0	10.0	50.0
3. DIS purchase	OMDA	.1						.1
Subtotal		.1		11.7	11.7	11.8	11.9	59.2
(OX) C. ELIMINATE/REDUCE MARGINAL PROGRAMS								
1. Reduce dumptruck procurement	OPA		7.2					7.2
2. Reduce welding shop procurement	OPA		5.6					5.6
3. Delay proc. of elec. equip. rpr. shop	OPA		4.7					4.7
4. Curtail mod. of M-113	WTCV		9.2					9.2
5. Curtail mod. of M-110	WTCV		6.0					6.0
6. Reduction in NG Trng	NGPA		7.0					7.0
7. NG Operating support	OMARG		18.8	1.6	1.6	1.6	1.6	26.8
8. Reserve training	RPA		5.0					5.0
9. Marginal prog. reduc.	OMA		37.0					37.0
10. Subsistence allowance	MPA		2.0		60.0	60.0	60.0	397.0
11. NG participation on RC infantry	NGPA		2.0		2.0	2.0	2.0	12.0
12. Cancel second recruiting center	MCA		2		.2	.2	.2	1.0
			3.0					3.0

TOTAL OBLIGATIONAL AUTHORITY—Continued

[in millions of dollars saved]

Code II. Operations	Appn.	Fiscal year—							Total
		1981	1982	1983	1984	1985	1986	1987	
13. DD retirements.....	OMNR			3.6					3.6
	OMN		8.7	12.4	14.2	23.0	13.0		71.3
14. Pollution abatement.....	OMN		15.0	14.0	14.7	15.4	16.0	16.8	91.9
15. Service Contracts (NSA).....	OMDA		.5	.5	.5	.5	.5	.5	3.5
16. Audiovisual act.....	(AFIS) OMDA		.1	.1	.1	.1	.1	.1	.7
	(DLA) OMDA		.1	.1	.1	.1	.1	.1	.6
	(DAVA) OMDA		1.4	1.5	1.5	1.6	1.6	1.7	9.3
	OMA		14.0	12.7	12.7	12.7	12.7	12.7	77.5
	OMAF		5.6	5.9	6.2	6.5	6.8	7.1	38.1
	OMN		7.1	5.2	5.4	5.7	6.0	6.2	35.6
	OMMC		.7	.7	.7	.7	.7	.7	4.2
	OMNR		.1	.1	.1	.1	.1	.1	.6
	OPN		1.8	.7	.7	.7	.8	.8	5.5
	ROTEN		1.2	.2	.2	.2	.2	.2	2.2
	MPN		2.7	2.7	2.7	2.7	2.7	2.7	16.2
	MPMC		.7	.7	.7	.7	.7	.7	4.2
	OMAFR		.1	.1	.1	.1	.1	.1	.6
	OMANG		.3	.4	.4	.4	.4	.4	2.3
	ROTEAF		4.2	4.4	4.6	4.9	5.2	5.4	28.7
	OPAF		3.3	3.4	3.5	3.6	3.7	3.9	21.4
	MPAF		4.5	4.5	4.5	4.5	4.5	4.5	27.0
17. OSHA.....	OMAF		8.5						8.5
18. MAC commercial gateway.....	OMAF				.2	.2	.2	.2	1.0
Subtotal.....		37.6	206.1	140.9	137.6	148.2	139.9	128.7	939.0
(OB) D. BASE REALIGNMENTS									
1. Civilian personnel base realignment.....	OMAF		30.3						30.3
2. Air-630.....	OMN		.2	.2	.2	.2	.2	.2	1.2
3. EUROM HQ collocation.....	OMA		11.0	11.0	11.0	11.0	11.0	11.0	66.0
4. OSUT at Ft. Bliss, Tex.....	MPA		4.1	4.1	4.1	4.1	4.1	4.1	28.7
	OMA		.6	.6	.6	.6	.6	.6	4.2
5. Long range signal/training (Ft. Gordon).....	OMA		.3	.5	.5	.5	.5	.5	2.8
	MPA		2.3	2.6	2.6	2.6	2.6	2.6	17.9
	OPA		-.3						-.3

TOTAL OBLIGATIONAL AUTHORITY—Continued

(In millions of dollars saved)

Code II. Operations	Appn.	Fiscal year—						Total
		1981	1982	1983	1984	1985	1986	1987
6. ADA realignment.....	OMA	6.5	6.5	6.5	6.5	6.5	6.5	45.5
	FHMA	1.6	1.6	1.6	1.6	1.6	1.6	11.2
	MPA	17.8	17.8	17.8	17.8	17.8	17.8	124.6
7. U.S. Army News Release Center.....	MPA	1	1	1	1	1	1	7
	OMA	3	3	3	3	3	3	21
	OMA	9	9	9	9	9	9	63
8. Chaplain School.....	FHMA	4	4	4	4	4	4	28
	MPA	2	2	2	2	2	2	14
9. Philadelphia Outport.....	MPA	1	1	1	1	1	1	7
	OMA	3	3	3	3	3	3	21
10. St Louis Pub AG Center.....	OMA	6	6	6	6	6	6	42
11. Ft. McArthur, Calif.....	OMA	8	8	8	8	8	8	49
	OMA	21	21	21	21	21	21	90
	FHMA	1	1	1	1	1	1	4
	MCAR	-22	-2					-24
12. Ft. Kamehameha.....	MPA				1	1	1	4
	OMA	3	3	3	3	3	3	21
13. Consol. of fin. and acct. MTMC.....	MPA	1	1	1	1	1	1	7
14. District recruit ctr (Niagra).....	OMA	3	3	3	3	3	3	21
	OMA	1	1	1	1	1	1	7
	MPA	2	2	2	2	2	2	14
15. AA West District (Redwood Cty).....	OMA				1	1	1	4
16. New Cumberland Army Depot.....	MPA				3	3	3	14
	OMA				134	134	134	595
	MCA		-8					-8
Subtotal.....		34.3	77.9	56.0	65.1	65.2	65.3	429.2
(OS) E. BASE SUPPORT CONSOLIDATION/REDUCTION								
1. Civilian personnel base realignment.....	ROTEAF		3.8					3.8
	OMAFR		1.9	1.9	2.0	2.1	2.2	12.4
	OMANG		4.0					4.0

TOTAL OBLIGATIONAL AUTHORITY—Continued

[In millions of dollars saved]

Code II. Operations	Appn.	Fiscal year—						Total
		1981	1982	1983	1984	1985	1986		1987
2. Realigned ops. AFCC.....	OMAF.....		1.6	1.6	1.6	1.6	1.6	9.6
	MPAF.....		3.7					3.7
	OMA.....		5.0					5.0
3. Commercial activities.....	OMA.....		20.0					20.0
4. Other engineer support.....	OMA.....		2.0		4.8	4.8	4.8	25.0
5. Telcom centers.....	OMA.....			10.0	10.0	10.0	10.0	50.0
6. Defense retail inter-service support (DRIS).....	OMN.....			10.0	10.0	10.0	10.0	50.0
	OMAF.....			10.0	10.0	10.0	10.0	50.1
	OMN.....		7.2					7.2
7. MRRP contract admin.....	OMN.....		2.0	10.0	12.0	12.0	12.0	60.0
8. Commissary store employ.....	OMN.....			.2	.3	.3	.3	1.4
9. DOD Computer Institute.....	MPN.....							
Subtotal.....		51.2	47.5	50.7	50.8	50.9	51.1	302.2

(OA) F. ADMINISTRATIVE OVERHEAD

1. Consulting and related services	OPAF		1.9					1.9
	OMAF		22.6	22.4	23.5	24.6	25.7	145.3
	ROTEAF		17.9					17.9
	OMAFR		.2	.2	.2	.2	.2	1.2
	OMANG		.2	.2	.2	.2	.2	1.4
	OMA	6.3	23.5	23.5	23.5	23.5	23.5	147.3
	OMN	12.0	123.2	126.8	185.5	194.0	202.7	1,055.8
	OMMC	.2	.5	5.8	6.1	6.3	6.6	32.3
	OMNR	.1	.1	1.0	1.0	1.1	1.1	5.5
	APN	.8	6.8	3.0	3.0			13.6
	WPN	.2	.4					.6
	SCN	1.4	16.5	5.0	5.0			27.9
	OPN	.5	4.0	1.0	1.0			6.5
	PMC		1					.1
	ROTEN	11.9	47.3	34.0	84.0			177.2
	ROTEA	1.4	6.9	6.9	6.9	6.9	6.9	42.8
	WTCV	1.2	6.0					7.2
	OPA	.1	.5	1.3				1.9

TOTAL OBLIGATIONAL AUTHORITY—Continued

[In millions of dollars saved]

Code II. Operations	Appn.	Fiscal year—							Total
		1981	1982	1983	1984	1985	1986	1987	
4. Admin. use vehicles	OMA		6.0	15.0	18.0	18.0	14.0	10.0	81.0
5. Buy vs. lease ADP	OMN			3.0	3.1	3.0	3.1	3.0	15.2
	OPN			-5.6					-5.6
6. Fiscal intermediary contract (CHAMPIUS)	OMDA		2.0						2.0
7. Reorganization (CHAMPUS)	OMDA	2	.2	.2	.2	.2	.2	.2	1.4
8. ADP lease (DCA)	OMDA			.1	.3	.4	.4	.4	1.6
9. Efficiency review (DCA)	OMDA		2.0						2.0
10. Dining hall controls	MPA		3.1	7.4	7.4	7.4	7.4	7.4	40.1
	MPN		.9	2.0	2.0	2.0	2.0	2.0	10.9
	MPMC		.9	2.5	2.5	2.5	2.5	2.5	13.4
	MPAF		.8	1.4	1.4	1.4	1.4	1.4	7.8
11. Central applicant supply system (DLA)	OMDA			.7	.7	.7	.7	.7	3.5
12. Reorganization of centralized referral activity (DLA)	OMDA			1.0	1.0	1.0	1.0	1.0	5.0
Subtotal		78.3	407.7	368.5	489.6	410.0	419.9	429.2	2,603.2
(OP) G. INCREASED PRODUCTIVITY/PERSONNEL EFFICIENCY									
1. Capital investment savings (AF)	OMAF		24.0	25.5	26.7	28.0	20.2	30.5	163.9
	ROTEAF		2.6						2.6
	OMAFR		1.3	1.3	1.4	1.5	1.5	1.6	8.6
	OMANG		3.1						3.1
2. Productivity savings	OMA		38.7	3.7	38.7	38.7	38.7	38.7	232.2
3. PACE	OMA		1.3	8.1	9.8	10.0	10.3	10.5	50.0
4. Video conferencing	OMA			.2	.2	.2	.2	.2	1.0
5. Centralized mgt. of conventional ammo	PAA			6.0	10.0	12.0	12.0	12.0	52.0
6. OSD productivity investment program, Army	MCA			1.8					1.8
7. Source data automation network	OMN		.6	.6	.6	.6	.7	.7	3.8
8. Music program	OMN		.1	.1	.1	.1	.1	.1	.6
	MPN		.1	.1	.1	.1	.1	.1	.6
9. Recruiting and advertising	OMN		11.0	8.7	9.1	9.5	10.0	10.4	58.7
	OMARNG		1.0	1.0	1.0	1.0	1.0	1.0	5.8
	OMA		9.0	9.0	9.0	9.0	9.0	9.0	54.0

TOTAL OBLIGATIONAL AUTHORITY—Continued

[in millions of dollars saved]

Code II. Operations	Appn.	Fiscal year—					Total
		1981	1982	1983	1984	1985	
10. Military pay systems.....	OMN		.8	1.2	1.3	1.4	7.4
11. Joint recruiting and advertising program.....	OMN		2.4	2.4	2.5	2.7	15.5
	OMMC		1.7	1.7	1.7	1.7	10.2
	OMA		6.7	7.1	7.1	7.1	42.2
	OMAF		1.6	1.6	1.6	1.6	9.6
	OMDA		-82	-82	-82	-82	-49.2
12. Recruiting data systems.....	OMN		.1	.1	.1	.1	.6
13. Underutilized computers.....	OMN		.4	.7	.8	.8	4.2
14. Medical program.....	OMN			.1	.1	.1	.5
15. NAESU batch processing.....	OMN			.3	.3	.3	1.5
16. ADP VAX main frame.....	OMN			1.1	1.2	1.3	6.3
17. Computer operations (USUHS).....	OPN			-5			-5
18. Library personnel (USUHS).....	OMDA		.1	.1	.1	.1	.6
19. Productivity.....	OMDR			.1			.2
	OMAR		1.3	1.3	1.4	1.5	8.6
	(DLA) OMDA		15.6	15.6	15.6	15.6	93.6
	(DMA) OMDA		2.9	2.7	2.8	2.4	14.7
20. Computer ops. (DMA).....	OMDA	5.3	2.4	2.3	2.9	2.9	21.6
21. Personnel efficiencies (DMA).....	OMDA			.3	.3	.3	1.5
Subtotal.....		5.3	120.6	131.1	138.2	142.2	828.0
(00) H. OTHER OPERATIONS IMPROVEMENTS							
1. Energy conservation.....	OMAF		-27.9	2.4	4.4	8.9	17.4
	(DNA) OMDA		.1	.1	.1	.1	.6
	(USUHS) OMDA		.1	.1	.1	.1	.4
	OMA	37.6	50.2	61.5	68.5	80.1	510.3
	FMN					97.1	115.3
	FHAF					1.4	1.4
	FHA					1.9	1.9
	MCA					9.9	9.9
	MCANG			11.8	31.1	31.1	11.8
2. Reuse of materials.....	ROTEAF		.8				.8
			.1				.1

TOTAL OBLIGATIONAL AUTHORITY—Continued

[in millions of dollars saved]

Code II. Operations	Agency	Fiscal year—						Total
		1981	1982	1983	1984	1985	1986	
3. Reuse of surplus equip.....	ROTEAF.....	1.6						1.6
4. Implementation of audit recommendations (Navy).....	OMN.....		.5	7.1	7.4	7.8	8.1	39.4
	OMMC.....		1.2	.3	.3	.3	.3	2.7
	WPN.....			2.5				2.5
	MCN.....			1.4			2.2	3.6
5. NFC Cleveland computers.....	OMN.....		.9	.9	.9	1.0	1.0	5.8
6. Military records maint.....	OMN.....		.1	.2	.2	.2	.2	1.1
7. Consolidated TCP MGT (NSA).....	OMDA.....			1.5	1.4	1.4	1.4	7.1
8. Satellite Broadcasts (AFIS).....	OMDA.....			2.2	2.2	2.2	2.2	11.0
9. Commercial Satellite Broadcasts.....	OMA.....			.4	1.7	3.6	5.4	17.1
	OMN.....			.4	1.7	3.6	5.4	17.1
	OMAF.....			1.2	5.1	10.8	16.4	51.4
10. Satellite activity (AFIS).....	OMDA.....				2.4			2.4
11. Microwave circuiting (AFIS).....	OMDA.....					2.6	2.6	7.8
12. AFRIS consolidated facilities (AFIS).....	OMDA.....						3.1	6.2
13. Service contracts (AFIS).....	OMDA.....							3.3
14. Admin. support (USUHS).....	OMDA.....							.9
15. Motion media depository consolidation (DAVA).....	OMDA.....			.1	.2	.2	.2	1.2
16. Still media depository consolidation (DAVA).....	OMDA.....			.2	.2	.2	.2	.9
17. Recycling and reuse (DAVA).....	OMDA.....		.1	.1	.1	.1	.1	.7
18. Use of public health service clinic program.....	MCA.....		2.6					2.6
19. Accomplish Roland maint. in nondedicated facility.....	MCA.....			7.6				7.6
20. Reduction in housing consolidation cost.....	MCA.....			2.2				2.2
21. Less-extensive facility improvement.....	MCAF.....			5.0				5.0
22. Rehab vs. new construction of housing.....	MCAF.....			4.1				4.1
Subtotal.....		42.0	45.3	94.5	141.2	167.7	183.9	885.3

REACQUIRING STRENGTH

Senator LEVIN. You made an interesting statement on page 5 of your statement this morning about reacquiring the relative strength that we once had. To what period are you referring? What relative strength and during what period of time; was it in the 1960's or 1970's?

Secretary WEINBERGER. It is a general term which I designed to cover or indicate that what we feel we have to do is to get a sufficiency of strength. I have emphasized many times we are not talking about superiority that a lot of people attribute to it.

We want a sufficiency of strength that we will feel confident can convey correctly to the Soviets that if they should launch a first strike we will be able to retaliate after that strike and inflict so high a cost that they will find it unacceptable.

I can't give you the precise dollar at which we will close that line, but I know we have to do a great deal more than we have done. We have to acquire a great deal more than we have now and we have to acquire a degree of momentum and a degree of constancy that indicates if we are given that time we will acquire that kind of strength.

This is the second increment, so to speak, of the program that we believe is necessary to do that.

Senator LEVIN. You are not talking about reacquiring nuclear superiority?

Secretary WEINBERGER. No, we are not talking about 51,000 tanks or two more missiles than they have in total, or anything of that kind. What we are trying to do is to develop a degree of strength that we think will deter aggression.

Senator LEVIN. When the statement is made that we are doing as much as it takes to reacquire the relative strength we once had, I would think that the average reader would read into that superiority and that our friends in Europe would not be benefited by that kind of statement.

What you seek, as you described just now, is something that I think makes a lot of sense, but the statement about reacquiring the relative strength we once had, I think, does sound an awful lot like seeking superiority. I think it is that kind of statement which our allies find very difficult to handle.

Secretary WEINBERGER. I think I specifically disclaimed in there superiority as a goal, as I have done so many times in public talks and public hearings. We did again when we presented the strategic program.

Senator LEVIN. I did not see it in today's statement.

Secretary WEINBERGER. I am told by the general it is on page 9. Yes, "This administration does not regard nuclear strength as a substitute for conventional strength. While we do not seek nuclear superiority by the United States, by the same token we will make every necessary effort to prevent the Soviet Union from acquiring a superiority that would mistakenly and tragically lead them to believe a first strike by them would ever succeed."

It is also true of conventional strength. We want a sufficiency of strength to deter aggression. We do not seek superiority.

Senator LEVIN. I think that is a helpful clarification.

The comment you made about our allies, that they "may seem" to be spending less than they should, I don't think is a very strong statement about the inadequacies of our allies' spending. I would hope that you would do more than say that they may seem to spend too little. In fact, we believe a number of them at least spend clearly less than their own commitments should lead them to spend.

Secretary WEINBERGER. There are two ways of dealing with that, Senator. One is to use a bludgeon and the other is to try your best to be as effective as you can in restricted meetings and by quieter means of trying to bring home to them the enormous importance to their own self-interest of this.

Frequently the government officials are in full agreement; they have difficult constituencies and they have difficult problems in their own countries. We all need to do more. Italy, for example, is doing extremely well; England is doing well, given their economic situation. There is a real decline in Germany for 1982 when you measure inflation, and there is a variety of responses.

Senator LEVIN. I understand your quiet approach to correcting the problem, but I think at least the assessment of the problem ought to be a straightforward one and the assessment of the problem is—and I think we ought to say this openly—that a number of our allies are not doing what they committed to do.

How do we go about correcting it I think we can differ on, and we do, but at least in terms of the assessment I don't think we ought to talk about their seemingly doing less. I think they do less than they committed themselves to do.

Let me ask General Jones a question. Before I do, I want to add my voice, General, before you leave us, to those who have commended your service. I think you have walked a very difficult line, as all people have in your position, between independence, honesty and candor, and loyalty. I think you have done it with great honor and dignity. I commend you on your service. I have enjoyed working with you.

General JONES. Thank you, sir.

UNDERFUNDING

Senator LEVIN. General Jones, Senator Nunn asked about a report to the Defense Resources Board relative to a \$750 billion underfunding of the 1984 to 1988 defense program. I believe the Secretary said that there was not such a report; it was simply the joint strategic objective plan, a JCS wish list he said, which is very different from what it was described to be in the press. What was your understanding of that document? Was it a document disclosing underfunding of the outyear defense programs, or was it also your understanding that that was simply a JCS wish list?

General JONES. Senator Levin, we developed an objective plan and made the judgment that if you were to try to meet crises simultaneously in various parts of the world, under very demanding circumstances, you would need additional forces and additional capability, even above the program. That does not mean that we recommended the 5-year budget be increased to fund that.

Someone else took the data—what we had come up with in regard to forces—and estimated that if one tried to buy all of that in 5 years, it would cost the following.

So, there was a basis for the added forces, but we did not wish to get all that capability in 5 years.

Senator LEVIN. Is the 1984 to 1988 budget underfunded, in your opinion?

General JONES. There are critical needs that we have not been able to obtain within the growth in this budget. There are backlogs. We would like, for example, to increase sustainability to 60 days before the end of the 5-year period. We recognize the importance within the country of having a strong economy as well as a strong defense, and we believe that the proposed level of overall obligational authority is probably right, even though there are areas where the risks will be greater than we would like to see. Also, we would like to see the shortfalls corrected earlier, but we believe the level is a reasonable budget and we are on the right trend lines.

Senator LEVIN. Mr. Chairman, my time is up. I would like permission to file additional questions for the record.

Senator HUMPHREY. Certainly.

Mr. Secretary, we will ask that you and General Jones provide replies to questions to be submitted in writing.

Secretary WEINBERGER. Surely.

Senator HUMPHREY. I ask unanimous consent that Senator Cannon, who is necessarily absent, may submit questions in writing.

Thank you, Mr. Secretary and General Jones.

Secretary WEINBERGER. I want to express the very great appreciation we have for the courtesy of the committee.

Senator HUMPHREY. The following questions are to be answered for the record.

[Questions with answers supplied follow:]

QUESTIONS SUBMITTED BY SENATOR JAMES EXON, ANSWERS SUPPLIED BY HON. CASPAR WEINBERGER, SECRETARY OF DEFENSE, AND GEN. DAVID C. JONES, CHAIRMAN, JOINT CHIEFS OF STAFF

MINUTEMAN MISSILE FIELD

Senator EXON. Mr. Secretary, on December 31 the Air Force announced that it should no longer consider Titan missile silos for the interim basing of MX missiles. This means that one of the six existing Minuteman missile fields will be chosen as the site for this interim basing this spring.

What progress has been made in narrowing down the choice to one Minuteman missile field? What are the criteria which will be used to make this decision?

Answer. The Air Force is studying site narrowing and will produce a report in the near future. Work completed in the site narrowing process to date includes (1) identification of factors and criteria for site narrowing based on MX requirements, and (2) collection of relevant data on all Minuteman wings. Current efforts focus on evaluation of the Minuteman wings, with respect to the site narrowing criteria. A final narrowing decision is expected in the Spring.

Criteria used for MX site narrowing are operational and technical in nature. Minuteman wings that are incompatible with MX requirements will be eliminated from further consideration. MX operational and technical criteria for use in site narrowing include operational effectiveness; command, control and communications (C³); construction requirements; inherent hardness; arms limitations; consistency with long-term basing; impact on current operations; and weather.

MINUTEMAN II SILOS

Senator EXON. If MX missiles are placed in Minuteman II silos, what will happen to those Minuteman II missiles?

Answer. Missile downstages will be shipped to the depot Hill AFB, UT. Guidance sets will be shipped to the depot at Newark AFS, OH. Reentry vehicles will be shipped to the depot at Kelly AFB, TX.

Missile assets will support various system test programs into the 1990's. The increased test assets will allow maintenance of MM II reliability and accuracy into the 1990's.

MINUTEMAN III SILOS

Senator EXON. If MX missiles are placed in Minuteman III silos, what will happen to those missiles? Will the Minuteman III missiles be moved to Minuteman II silos?

Answer. Our overall goal is to deploy and maintain the most capable Minuteman force mix. Removed MM III's will either replace MM II's or be placed directly into storage as MM III test assets. A final decision will be made when long term aspects of the ICBM modernization program and projected late 1980's Minuteman flight testing requirements are more clearly defined.

NEED FOR ADDITIONAL LAND

Senator EXON. The Air Force has stated that, for the MX interim deployment in Minuteman silos, no additional land will be needed except that some of the existing access roads may have to be widened. Would you confirm or comment on that?

Answer. Without specific siting, the Air Force cannot be absolutely sure that land will not be required for some aspects of the MX interim deployment in Minuteman silos. However, based on our knowledge of the size of the MX missile, transporter equipment, and Minuteman silo access roads, it is reasonable to assume that some silo access roads will have to be widened, but that additional land will not be required for the launch facility itself. Also, we are continuing our study of the quantity distance safety criteria associated with MX and upon completion of that effort will have a better understanding of the possible requirements for relocating dwellings and roads.

NEED FOR MORE LAND FOR MINUTEMAN DEFENSE

Senator EXON. If MX missiles are deployed in Minuteman silos and a later decision is made in 1983 to protect them with an Anti-Ballistic Missile (ABM) system, how much more land would be taken for such an ABM array?

Answer. A decision to add ballistic missile defense to MX missiles in Minuteman silos would probably require some additional land. At this early point in concept development, however, the amount which might be required, if any, has not been determined.

PROGRESS IN ABM FIELD

Senator EXON. What progress is being made in the ABM field? Is there a possibility that a workable ABM system could be developed by mid-1983 which could serve as part of a permanent MX basing mode?

Answer. The Army and the Air Force are working separately and together on ways to defend various MX deceptive basing approaches. We are working hard to have enough data and analyses to support a decision date of not later than 1 July 1983. The earliest deployment of a workable defense system would be in [deleted].

-- MX DEFENSE VERSUS SUNK COST

Senator EXON. Once the first 40 MX missiles are deployed on an interim basis in Minuteman silos, won't the temptation be great to simply attempt to defend them with an ABM system because of the "sunk" cost already committed rather than pulling them out again for some other, more permanent basing mode?

Answer. Our decision in July 1983 on what system to develop will be based on each option's contributions to our objectives and the future costs of implementing each option.

PROGRESS TOWARD PERMANENT BASING MODE

Senator EXON. What progress is being made with regard to the permanent basing mode decision for the MX? What are we discovering about deep underground

basing? Continuous air patrol basing? What work is being done on deceptive basing? Is there a clear winner emerging?

Answer. Concerning deep basing, the Air Force and the Defense Nuclear Agency are investigating the possibility of performing a test in Nevada using a hardened tunnel with a high explosive simulation of a nuclear surface burst, both for top loading and for side loading in mesa-like terrain. Additionally, all relevant work done in the past is being studied, and various concepts are being created and evaluated. Because of the Congressional prohibition in the Authorization Conference Report, we are doing no work on the continuous patrol aircraft option. We will be continuing our discussions with the Authorization Committees, however, with the objective of obtaining agreement on a plan to spend approximately \$10 million dollars of fiscal year 1982 R.D.T. & E. funds on studies of the concept. Deceptive basing is being considered as part of the ballistic missile defense option. The Army and Air Force are working separately and together to define various ways to defend various types of deceptive basing, and all of this activity is closely coordinated by the sub-panel of our Strategic Forces Executive Committee.

Overall, we are working to develop sufficient technical understanding of the three options to enable a rational decision by July 1, 1983. At this early point, there is no clear winner or loser emerging.

DECOMMISSIONING TITAN MISSILES

Senator EXON. Mr. Secretary, on January 15 of this year I sent you a copy of my letter to Air Force Secretary Vern Orr regarding the proposed dismantling of Titan missiles. The thrust of my letter was that the Air Force is currently planning to begin decommissioning Titan II missiles at the rate of one per month in October 1982.

I cannot understand the rationale for this decision. During the last 2 years, the Air Force began a program to increase the safety of these missiles with their highly-volatile liquid fuels. Until October of last year, when the administration announced its strategic program, it was planned to keep these missiles on alert until at least the late 1980's.

From a military standpoint, I cannot agree with this decision in light of the "window of strategic vulnerability" we face. This resultant drawdown of warheads and megatonnage available to our deterrent force during the dangerous period ahead concerns me greatly, especially in conjunction with the delay in the IOC for a survivable MX missile basing mode.

From an arms control standpoint, I cannot believe that our START negotiation team can be pleased with the prospect of beginning negotiations in a weaker current position than the one in which we found ourselves last October.

Mr. Secretary, would you please explain how this decision to begin decommissioning Titan missiles will enhance our national security from any standpoint, including those which I have mentioned—even within the contest of the overall Reagan strategic program?

Answer. The decision to retire the Titan II beginning in 1982 was a difficult one for the Air Force, given the "window of strategic vulnerability." The Titan II has been an important element of our overall strategic deterrent force for about 20 years. Undoubtedly, it would continue to have some strategic value in the years ahead. However, the Titan II system is aging and becoming increasingly more costly to maintain. The Air Force has assessed that the net savings of nearly \$500 million that can be achieved by gradually phasing out the Titan during the 5-year defense plan period would be more effectively redirected to programs which will provide more capability for a longer time into the future. After making this assessment and with consideration of the magnitude of the strategic forces problem that must be solved, the Air Force recommended and the President approved the phaseout of the Titan II.

The Titan II phaseout begins in October of this year and is tentatively scheduled to be complete in September 1987. It will be carried out at an operationally acceptable rate. The Air Force will be able to assure a safe, programed retirement. The Titan II boosters and propellants will be retained for possible future use in space launch activities. The silo-based MX force, with nearly eight times the number of Titan II warheads, will be 85 percent deployed before the last Titan II is taken off alert. Also, the deployment of 50 additional Minuteman IIIs in Minuteman II silos which was directed by the Congress in the fiscal year 1982 Appropriations Bill will partially offset the capability lost by retiring the more costly Titan II system. The administration supports this Congressional initiative and has provided \$15.8M in the fiscal year 1983 President's Budget proposal to complete the program.

From an arms control perspective, we recognize that there may be disadvantages for unilaterally retiring any system when negotiations are in progress or are contemplated. However, we are convinced that the United States will gain significantly more leverage by directing the funds needed to support Titan II toward the elements of the President's Strategic Modernization program.

COST TO KEEP THE TITANS IN SERVICE

Senator EXON. Would you confirm the cost figure of only \$165 million per year to keep the Titans in service?

Answer. The estimate of \$165M per year was valid for fiscal year 1983 only, and included almost \$30M one-time investment for the integration of communications equipment into Titan launch control centers (that program has since been canceled). Operating costs for six squadrons of Titan II's average approximately \$120M per year—to include reliability and maintainability modifications, military personnel, and miscellaneous supplies.

TITAN RETIREMENT AND ARMS CONTROL

Senator EXON. Were either Mr. Rostow or General Rowny consulted before this decision was made? What was their reactions before or since?

Answer. The decision to retire the Titan II missiles was made by the Department of Defense after careful consideration of the implications of such an action. In the final analysis, we assessed that the nearly \$500 million that would have been spent during the 5-year Defense Plan period on maintaining Titan II would be more effectively redirected to programs which will provide more capability for a longer time into the future and thus provide a better basis for any future START negotiations. We continue to believe that the best foundation for successful START negotiations is the demonstrated willingness of the United States to begin the restoration of the strategic balance. The President's Strategic Modernization program will realize this objective. As to the specific views of Mr. Rostow and General Rowny, it would be more appropriate for them to present their consideration of this subject.

GI BILL

Senator EXON. Mr. Secretary, there has been a great deal of discussion about the need for a new GI bill to assist the Services in their recruiting and retention programs. In recent months, however, the need for a new GI bill has been brought into question.

In November, you announced that fiscal year 1981 "was one of the best recruiting and reenlistment years since the inception of the All-Volunteer Force, both in terms of quantity and quality." You also indicated that for the rest of the 1980's "the Department should be able to recruit and retain sufficient numbers and types of volunteers to man the force if the All-Volunteer Force continues to receive the support of Congress and the American people."

The Congressional Budget Office agrees with the Department's improved recruiting forecasts. CBO has testified that their "revised recruiting forecast has changed the urgency associated with providing improved educational benefits."

Just last week, on January 26, the General Accounting Office pointed out that recently "each service has experienced a dramatic increase in the number of quality youth enlisting." The GAO went on to conclude that "This has reduced the urgency for immediate passage of a permanent GI bill, and perhaps raises the further question of whether such a program is needed at all at this time."

Mr. Secretary, what is your position on the need for a new GI bill? Will the administration be submitting a GI bill proposal to this Congress?

Answer. One very important reason for our fiscal year 1981 recruiting success was the test of various enhanced educational benefits provided by Congress. These enhanced educational benefits, when combined with the compensation increases authorized by Congress, DOD management initiatives, and the American public's growing support of our servicemembers, allowed us to reverse the negative recruiting trends of the later 1970's.

The fiscal year 1981 recruiting performance demonstrated that in order to sustain our successful recruiting efforts, it is imperative that we be able to offer high quality young people a range of enhanced educational incentives from which to select.

The Department is currently working with each of the Services to develop an educational benefits package that fits within the context of the total incentive package and that satisfies the Services' individual needs. Such an educational benefits proposal will be sent to the Congress in the near future.

RETIRED PAY

Senator EXON. The costs of military retired pay are increasing by approximately \$1.5 billion per year. The \$16.5 billion estimate for military retired pay in fiscal year 1983 is as much as we spent on all research and development in the Defense Department during last fiscal year.

The most common age at retirement from active duty is 43 for officers and 39 for enlistees.

a. Is anyone making a serious attempt to revise the military retirement system to bring down the costs and encourage our career service people to stay in service beyond the 20- or 21-year point?

b. Under current law, 20-year retirement is at the discretion of the service secretary. Has anyone considered lengthening the 20-year retirement point administratively to encourage longer service from our career service people?

Answer. The military retirement system is specifically designed to support the management needs of the active force. For the military structure the objective places primary emphasis on the maintenance of a force capable of instant and sustained employment to meet our defense needs. We believe this remains as a primary requirement. Against that background, we have identified the military retirement and estate program as a major subject for investigation by the Quadrennial Review of Military Compensation. This statutorily mandated review will assess the retirement system in terms of supporting our active force management requirements in both peace and mobilization. Should improvements be identified, amendatory legislation will be proposed for consideration by the Congress. We agree that the selection and retention of members on active duty can be of benefit to the Services. Recognizing this, a major piece of legislation, the Defense Officer Personnel Management Act, significantly improved our management flexibility of the active force. One aspect of that law permits extended active duty for members, and another requires 3 years of obligated service following promotion. Although it is too recent to measure the impact on the composition of the force, we believe that the result will be an increased retention among members possessing those talents, skills, and experience considered essential. Appropriately, the law pursues management objectives by amending active duty force management authorities rather than changing the retirement system to achieve those ends. We believe this is the appropriate method for retaining members, and appears to meet the objective some have requested.

MANPOWER

Senator EXON. Mr. Secretary, how large a deployed force do you think we could sustain in a time of conflict without resorting to a draft? For example, could we support a sustained Rapid Deployment Force of two divisions in the Persian Gulf region under the All-Volunteer Force?

Answer. The question as to when we would resort to the draft during a time of conflict would depend on a number of factors. Among them would be the perception of our leaders and the American public as to the nature of the conflict, the warning time preceding it, and its probable duration. In a period of full mobilization, the Department of Defense would request Congress to reinstate conscription for the purposes of executing our wartime mission.

In today's peacetime environment, the Rapid Deployment Joint Task Force (RDJTF) could easily support a sustained two division size force in the Persian Gulf from the available active duty forces. In fact, the limitation on the size of the force that could be deployed is constrained by strategic mobility assets, such as airlift, sealift, and amphibious ships rather than by the number of active duty divisions available.

Senator EXON. Secretary Weinberger, last November you stated that for the rest of the 1980's, the Defense Department should be able to attract sufficient numbers and types of volunteers to man the force if the All-Volunteer Force continues to receive the support of Congress and the American people.

a. How large an increase in the current 2.1 million active duty force are you projecting by the end of the current 5-year defense plan?

b. What additional incentives do you think will be required to increase active forces to your objective?

c. What will be the cost of these incentives?

Answer. a. At the end of fiscal year 1981, DOD had an active duty strength of 2.082 million. By fiscal year 1984, the last year for which we have firm planning figures, our active duty end-strength is programmed at 2.171 million, an increase of 89,000 over fiscal year 1981. Though our manpower objectives for the period beyond fiscal year 1984 do show continued growth in military strength (of an additional

93,500 by fiscal year 1987), these plans are only tentative and are under further review by the Department.

b. Recent improvements in military compensation and the strong support the military is receiving from Congress and the American public have contributed to significant increases in the recruiting and retention of military personnel. We feel that with a continuation of this support, to include continued comparability of military pay with that of the private sector, we will be able to sustain the All-Volunteer Force through the current 5-year planning period and beyond. The Department of Defense plans and budgets for compensation initiatives on a year-to-year basis. Thus we do not currently have a program of incentives beyond fiscal year 1983. For the near term, we have requested from Congress the following programs:

Increase in Servicemember/Dependent PCS Travel Reimbursement Rates.

Increased household goods weight allowance.

Full weight allowance to Germany and Okinawa.

Dental CHAMPUS (requires legislation).

We have requested funding for these programs, and strongly support them as essential to equity in the All-Volunteer Force and as legitimate costs of doing business for the Department. As the need arises, we will seek support from the Congress for further initiatives beyond fiscal year 1983.

c. The additional cost of the programs requested for fiscal year 1983 over 1982 are as follows (in millions of dollars):

Increase in servicemembers/dependent PCS travel reimbursement rates	85.9
Increased household goods weight allowance	57.4
Full weight allowance to Germany and Okinawa	72.0
Dental CHAMPUS (requires legislation)	110.0
Total	325.3

QUESTIONS SUBMITTED BY SENATOR HOWARD CANNON, ANSWERS SUPPLIED BY HON.
CASPAR WEINBERGER, SECRETARY OF DEFENSE

BUDGET TRENDS

Senator CANNON. Mr. Secretary, what are the investment trends—in terms of share of the budget for procurement and R. & D.—for strategic forces, general purpose forces and mobility forces during the fiscal year 1983 to fiscal year 1987 5-year defense program?

Mr. Secretary, over the fiscal year 1983 to fiscal year 1987 period, will there be real growth in the investment accounts for each of these areas?

Mr. Secretary, what are the specific amounts to be invested in these three areas during each year of the fiscal year 1983 through fiscal year 1987 period? What are these amounts in terms of constant dollars?

Answer. We are in the process of updating the 5-year defense plan (FYDP) in support of the fiscal year 1983 budget and the long-range forecast. We expect to be able to provide answers to your questions about budget trends in major force programs by March 1, 1982.

FISCAL YEAR 1983 PROGRAM FOR TACTICAL FIGHTERS

Senator CANNON. Mr. Secretary, the fiscal year 1983 program for tactical fighter and attack aircraft continues a trend set last year—where we are now buying about 300 such aircraft a year. In previous years, we bought about 400 or more. With the kinds of increases we have seen in the defense budget overall, shouldn't we be buying these tactical aircraft at more efficient rates?

Answer. In fiscal years 1979 and 1980 we reached our highest recent production level of fighter aircraft averaging about 370 aircraft per year. Since then fighter production has fallen off with the ending of A-10 production and lower production of the F-15. Due to the priorities of strategic modernization and force readiness, planned fighter production will be lower for fiscal years 1982 through 1984.

However, after that, our acquisition planning would increase rate production of our two first line fighters, the F-15 and F-16. Both of these aircraft offer the capabilities to meet the increasingly numerically superior threat through incorporation of proven technology.

Increased production rates of these aircraft would return fighter procurement to more efficient levels and will better satisfy our requirements for force moderniza-

tion and maintenance of force structure strength in the near term. Aircraft production trends are indicated below.

	Fiscal year								
	1978	1979	1980	1981	1982	1983	1984	1985	1986
A-10.....	144	144	144	60	20	20	.....	.....	.....
F-15.....	97	78	60	42	36	42	60	96	96
F-16.....	105	145	175	180	120	120	120	120	180
Total.....	346	367	379	282	176	182	180	216	276

MODERNIZE AIR-DEFENSE INTERCEPTOR SQUADRONS

Senator CANNON. Mr. Secretary, I understand that the Air Force intends to modernize its air-defense interceptor squadrons. Can you outline the scope of this modernization effort, and also tell us the extent to which this modernization effort will influence procurement of F-15 and F-16 aircraft?

Answer. The USAF, as part of President Reagan's strategic defense modernization program announced on October 2, 1981, will phase out the five active F-106 squadrons and replace these units with F-15s assigned the mission of North American air defense. The conversion has started, with the unit at Langley AFB scheduled to complete the transition in fiscal year 1982. The last unit will transition in fiscal year 1986 and at that time five air defense squadrons will possess the F-15. This effort will significantly improve our air defense capability. We are currently examining alternatives to replace the remaining F-106s now assigned to the ANG. We would plan to complete total F-106 retirement by the end of fiscal year 1988. Approximately 180 primary aircraft in addition to backup aircraft, trainers and attrition replacement aircraft will be required to support this planned modernization. The aircraft procurement program we have submitted with our fiscal year 1983 Budget will provide sufficient assets.

AIRCRAFT PROCUREMENT

Senator CANNON. Mr. Secretary, can we expect to see increases in the annual rates of procurement of Navy fighter and attack aircraft (especially A-6's and F-14's) in light of possible force-level increases to the Navy carrier battle groups?

Answer. Navy fighter and attack procurement rates were increased in the amended fiscal year 1982 budget in consonance with the programmed increase in carrier battle groups. Continued procurement of the mature F-14 and A-6 programs at approximately those rates will support the attainment of 14 carrier battle groups by [deleted]. The other two newer fighter and attack aircraft programs (F/A-18 and AV-8B) can be expected to increase to higher, more economical rates through the FYDP.

Senator CANNON. Mr. Secretary, will the Services expand the use of multiyear procurement in acquisition of aircraft in the fiscal year 1983 procurement program?

Answer. Yes, they will Senator. The fiscal year 1983 budget includes extra funding to initiate multiyear contracts for three additional aircraft programs beyond the two aircraft programs approved for multiyear contracting in fiscal year 1982. The two programs approved last year were the F-16 fighter program and the C-2A Carrier On-Board Delivery aircraft program. The three aircraft programs added in fiscal year 1983 are the Navy's A-6E attack aircraft, EA-6B electronic jamming aircraft and CH-53E heavy lift helicopter.

ARMY PROGRAMS

Senator CANNON. Mr. Secretary, there continues to be concern with the affordability of the Army's modernization program. Are you satisfied that the Army can efficiently procure 12 major systems over the next 5 years—given the levels of procurement funding the Army can expect?

Answer. Yes, I am satisfied that the Army can efficiently procure 12 major systems in the next 5 years with the expected real growth of defense funding. With the increased funding provided by this administration, the Army will procure the weapons with more efficient production rates and field them in a more timely manner. Our new major systems must be fielded promptly and in sufficient numbers to

counter the many quantitative and qualitative advantages the Soviets have achieved with their arms and equipment during their unprecedented peacetime modernization of the 1960's and 1970's.

Senator CANNON. Mr. Secretary, one Army program, in particular, has become controversial because of cost growth and technical problems. Do you continue to support the procurement of the AH-64 Advanced Attack Helicopter?

Answer. Yes. The AH-64 has been designed to fulfill a vital and unique role for our Army forces and is clearly ready to transition to production. Our test and analyses show that the technical problems are solved. We are concerned over the recent increases in the procurement cost estimate but believe that this program can, if negotiations are favorable, offer good value to the Government. We are now negotiating with the contractors and will procure the AH-64 only after we strike a fair price.

QUESTIONS SUBMITTED BY SENATOR JOHN WARNER, ANSWERS SUPPLIED BY HON.
CASPAR WEINBERGER, SECRETARY OF DEFENSE

UNIFORM FEDERAL PROCUREMENT SYSTEM

Senator WARNER. Mr. Secretary, the Department of Defense has been asked to comment on the Office of Federal Procurement Policy's draft of the Uniform Procurement legislation mandated by Congress several years ago. How does the Department regard the OFPP's recommendation of imposing a uniform procurement code on the entire Federal Government—either with dual-conforming statutes or a single code?

Answer. The Department has no objections to a procurement system that provides for, to the extent practicable, uniform Government-wide procurement policy. However, I also believe that DOD would be unable to meet its unique mission responsibilities of providing for the national defense and, in conjunction therewith, of supplying goods and services to our Armed Forces without a procurement code that recognizes our unique needs, our unencumbered authority to issue regulations, and the need to effectively manage decentralized procurement operations manned by a composite civilian/military force.

Senator WARNER. Is your Department going to recommend changes to or the scrapping of this proposal—at least as it relates to DOD—in the interagency coordination process? Will you take that recommendation to the President, if necessary?

Answer. In December 1981, we provided preliminary comments that express our recommendations and concerns with the Office of Federal Procurement Policy's (OFPP) draft proposal for a Uniform Federal Procurement System (UFPS). It is our understanding that OFPP is presently in the process of revising the draft UFPS proposal based upon comments received from the executive agencies and other interested parties. We will not know what other changes we may recommend until we have the opportunity to review OFPP's revised draft during the formal interagency coordination process.

STRATEGIC WEAPON SYSTEMS ACCELERATION

Senator WARNER. Mr. Secretary: You mention in your statement that you are "exploring the possibility of accelerating the delivery time of some of the most important strategic weapon systems." What weapons systems are you referring to in that sentence and where do you stand on your review?

Answer. We are investigating the possibility of accelerating the Trident II (D-5) SLBM. Similarly we will continue to strive to reach a decision on long-term, survivable MX basing mode as quickly as possible. A decision to accelerate a major weapons system involves consideration of such complex variable as feasibility, technical risk and cost. As a result, it is difficult to predict when such decisions will be reached. We will expeditiously notify the Congress in the event a decision to accelerate a given program is reached.

REPROGRAMING OF FUNDS ASSOCIATED WITH THE B-1 BOMBER

Senator WARNER. Mr. Secretary, how important do you believe it is that the Congress act promptly and favorably on the request for reprogramming of funds from the production account to the research and development account associated with the B-1 bomber?

Answer. Prompt approval of the reprogramming request to realine funds within the total fiscal year 1982 B-1B appropriation is absolutely essential if we are to main-

tain the 1986 Initial Operational Capability (IOC) and preserve the \$20.5 billion (fiscal year 1981 dollar) budget estimate. The B-1B production schedule, and program costs, are contingent upon an aggressive front-end research, development, test, and evaluation (R.D.T. & E.) program.

This R.D.T. & E. program is required to complete R.D.T. & E. activities that were incomplete or deferred when the original B-1A production/deployment program was discontinued in 1977; to incorporate producibility/cost redesigns; to integrate advanced, proven systems and technologies; and to incorporate the multirole capabilities directed by Congress. The R.D.T. & E. effort does not involve any new developments; rather, it supports the engineering, integration, and testing activities necessary to transition many components from development to production quality configurations.

If \$179.1 million is not reprogrammed from procurement to R.D.T. & E. within the fiscal year 1982 B-1B appropriation, there will be insufficient funds to accomplish the programmed R.D.T. & E. efforts in 1982. This, in turn, will require immediate restructuring of the B-1B program and renegotiation of our fixed price incentive firm target contracts.

IF REPROGRAMING REQUEST WERE DENIED WHAT WOULD THE B-1B PROGRAM EXPERIENCE

Senator WARNER. If such a reprogramming request were denied or delayed by the Congress what would the B-1 program experience?

Answer. B-1B production schedule and overall program cost are extremely sensitive to delays or reductions in critical frontend R.D.T. & E. funding. Without reprogramming within the fiscal year 1982 B-1B appropriation, there will be insufficient funding to support the R.D.T. & E. task programmed for fiscal year 1982. This, in turn, will require an immediate restructuring of the B-1B program and renegotiation of our fixed price incentive firm target contracts.

The result of these actions would be a 6- to 9-month slip in the production schedule, the IOC would slip to mid-1987, program schedule risk would be increased, and the program cost would increase by approximately \$350 million (in fiscal year 1981 dollars).

PRIORITY OF DEFENDED DECEPTIVE BASING

Senator WARNER. Mr. Secretary, I understand that the administration is moving out smartly to perform the necessary evaluations of MX long-term basing plans so as to meet the congressionally-mandated decision date of July 1983. It is also my understanding that considerable attention is being given to defended, deceptive basing options as part of this review. Is that correct? And does such a means of providing for the long-term survivability of MX continue to enjoy equal standing in your mind with the other options (continuous patrol aircraft and deep underground basing)?

Answer. We are definitely considering defended deceptive basing as an option within the ballistic missile defense (BMD) option for long-term basing of MX. Such a suboption would enable us to apply the highly effective tactic of preferential defense that creates favorable leverage for us. I do regard the overall option of BMD to be as likely a candidate as the other two options.

DBS REVIEW OF DEEP BASING

Senator WARNER. Mr. Secretary, I understand that you are asking the Defense Science Board to review the survivability of the continuous patrol aircraft (CPA) an effort comparable to the study done by the DSB last year on ballistic missile defense of MX. Is it your intention to direct the DSB to perform a comparable analysis of the operational and survivability features of the deep basing concept, as well? Do you think such a study would be useful in that it will provide an equivalent analytical baseline for considering the relative merits and deficiencies of these three basing concepts?

Answer. In the case of deep basing, it appears possible to get near-term test data that could prove much more conclusive than the best of analytical studies. The Air Force and the Defense Nuclear Agency (DNA) are investigating the possibility of performing a test in Nevada using a hardened tunnel with a high explosive simulation of a nuclear surface burst, both for top loading and side loading in mesa-like terrain. At this time, therefore, we do not intend to request a DSB review of deep basing.

IMPROVING OF STRATEGIC C³

Senator WARNER. Mr. Secretary, an important element of the President's strategic force modernization package introduced last fall—and one which this committee anticipated somewhat in its action on the fiscal year 1982 defense authorization bill—was the emphasis placed on improving our strategic command, control and communications capabilities?

Has that emphasis been retained in the President's fiscal year 1983 budget and does it continue to enjoy the high-level of interest and concern as an area of strategic vulnerability in need of improvement within the Department and the administration that it appeared to have last fall?

Answer. The emphasis on improving strategic command, control and communications (C³) has been enhanced. By direction of President Reagan, the Department of Defense conducted a high-level review of this area last year, and the results of that review were explicitly reflected in the President's October 2, 1981, announcement of his decision on modernization of the strategic forces. The momentum achieved as a result of fiscal year 1982 budget actions will not only be sustained but increased if the Congress approves the fiscal year 1983 budget request. The overall program continues to receive high-level attention to assure that timely and affordable solutions are implemented. More specifically, in fiscal year 1982, we are emphasizing essential initial steps to address deficiencies in the survivability and responsiveness of strategic C³ functions during and immediately following a first strike. In fiscal year 1983, we are requesting funds to continue these efforts and for initial efforts to upgrade the endurance of strategic C³.

TRIDENT SSBN CONSTRUCTION

Senator WARNER. Mr. Secretary: I note that you are requesting two *Ohio*-class submarines in fiscal year 1983. While I understand that such a request is necessary if, as a result of congressional action last year slipping the authorization for the 10th Trident, we are to maintain a building rate of one ship per year.

How important do you regard such a procurement in fiscal year 1983 to be from the standpoint of the President's strategic modernization program, the health of our sea-based deterrent, and the appropriate balance in the competition—within DOD—for limited resources?

Answer. We regard the continued steady procurement of *Ohio*-class submarines to be essential and extremely high in priority. This includes funding the remainder of the partially funded fiscal year 1982 submarine as well as the one previously programmed for fiscal year 1983. This is in accordance with the President's strategic modernization program announced on October 2, 1981. This program is adequate for the orderly replacement of the aging Poseidon force, which will reach a period of block obsolescence in the mid-1990s. It also avoids a production break, which would result in an inefficiency in building Trident submarines.

The overall strategic program is affordable; it fits within the fiscal guidelines announced by the President. We can modernize our strategic forces and still meet other commitments.

QUESTIONS SUBMITTED BY SENATOR SAM NUNN, ANSWERS SUPPLIED BY HON. CASPAR WEINBERGER, SECRETARY OF DEFENSE, AND GEN. DAVID C. JONES, CHAIRMAN, JOINT CHIEFS OF STAFF

DEFENSE OUTLAYS

Senator NUNN. Is the \$5 billion reduction in outlays you mentioned earlier going to be cut from \$215.9 outlay figure you mentioned on page 12 of your statement?

Answer. This reduction has already been incorporated into our current fiscal year 1983 outlay estimate of \$215.9 billion.

Senator NUNN. How is this outlay reduction to be achieved through the fiscal year? What programs will be cut or management actions taken?

Answer. No further programmatic reductions are planned to reduce fiscal year 1983 outlays below the current level. However, we will continue to seek new savings and efficiencies wherever possible.

DEFENSE DEFLATOR

Senator NUNN. I recall some report that DOD has finally convinced OMB that DOD procurement should have a different inflation rate than the rest of the budget. Does the fiscal year 1983 program incorporate this new concept which I recall was one of the needed improvements cited in the Carlucci memorandum?

Answer. Our fiscal year 1983 requests for procurement of aircraft, missiles, weapons, and ships now include estimates of inflation based more in terms of economic events affecting those industries actually providing goods and services for military use.

Senator NUNN. How much of the outlay and TOA for fiscal year 1983 is related to the more realistic inflation rate? (And I should add you have succeeded with OMB where many before you have failed).

Answer. Approximately \$2.1 billion was included in our TOA request for these rates in fiscal year 1983. All of the funds requested were in the slower spending procurement accounts which have low first-year outlays.

WISH LIST

Senator NUNN. Mr. Secretary, you characterized recent news media accounts about the citing before the Defense Resources Board of \$750 billion in additional costs as a "wish list."

In the past administration a similar detailed report comparing budget levels to strategy and force requirements was completed and also drew the displeasure of the Secretary of Defense. This study highlighted the strategy-force mismatch and the large budget shortfalls.

News media accounts indicate the most recent study was entitled "Planning Defense Resources to Match Strategy." Is this analysis more than just a "wish list?" Was it an attempt to place a budgetary cost on a mismatch between purported resources and requirements?

Answer. The briefing you refer to was indeed an assessment of the difference between requirements and resources. The Defense Resources Board examined not only the potential need for increased capabilities and their approximate costs, but also the potential for reductions in the DOD top line. The \$750 billion figure was generated by estimating the difference between the cost of all possible enhancements to the current five-year program and the lowest estimate of the DOD top line. By far the largest single contributor to the requirement side of the calculation was the investment and operating costs associated with achieving the so-called JSPD planning force. JSPD stands for the Joint Strategic Planning Document prepared annually by the Joint Chiefs. The JSPD planning force represents the JCS assessment of that force structure which could successfully execute, with reasonable assurance, the approved national military strategy. It provides a "benchmark" for capabilities and risk assessments. It is based on relatively unconstrained planning. It is a planning tool which the Department has used historically. As part of the JSPD, the Chiefs also present views on the attainability of these planning forces, considering fiscal constraints, manpower, material availability, technology, and industrial capacity. In practice the forces to meet the strategy exceed our ability to pay for them and we must accept the associated risk. The JSPD provides a basis for establishing goals and priorities, and in estimating risks, but it does not represent a Department position on force planning objectives which must necessarily balance competing demands with available resources.

REPORT CREDIBILITY

Senator NUNN. Mr. Secretary, who prepared this report and does it have any credibility with you at all?

Answer. The briefing entitled "Planning Defense Resources to Match Strategy" was prepared jointly by the Offices of the Under Secretary of Defense (Research and Engineering) and the Assistant Secretary of Defense (Manpower, Reserve Affairs, and Logistics). Of course the work has credibility with me but it must be viewed for what it is—a piece of planning and internal Department thinking with the purpose of developing guidance, stimulating discussion, and providing alternatives on major resource allocation issues.

Senator NUNN. Mr. Secretary, how does an analysis that is just a "wish list" make it before the prestigious Defense Resources Board?

Answer. The term "wish list" was not meant to denigrate the briefing but was meant to characterize the unconstrained nature of the requirement. That is—if we wished to meet our strategy with minimum risk then we would need to invest additional resources. We recognized from the start that the required resources would be beyond the scope of the currently projected top line. I believe we need as much informal discussion throughout the Department as we can generate on the resource allocation problem. This briefing and others have provided a way to focus our attention and to stimulate this needed dialogue.

STRATEGY-FORCE MISMATCH

Senator NUNN. General Jones, do you have any observations on the 5-year defense plan and the so-called strategy-force mismatch?

Answer. The 5-year defense program provides for an enhanced nuclear deterrent force, improved capabilities to deploy and sustain general purpose forces worldwide, and a better manned and more balanced total military force within realistic resource constraints. The program if executed as proposed will reduce the mismatch that has existed between U.S. strategy and the forces available to execute that strategy with a low risk.

Senator NUNN. Mr. Secretary, I know you are aware of and concerned about the continuing problem of escalating weapon system costs.

Secretary of the Army Marsh recently forwarded an excellent report on this subject and cited poor internal Pentagon accountability as one past problem area.

As you know, Congress approved a special report on unit cost increases in the 50 systems covered by the SAR and the first reports, if any, were due to the Service Secretaries on January 7, 1982.

From what you know of the budget, the December SAR covering the quarter ending over a month ago, for how many systems do you expect Congress will be notified that unit costs have increased 15 percent over the March 31, 1981 baseline?

Answer. Based on preliminary information, it appears that 18 systems will breach the 15-percent threshold for either total program acquisition unit cost or current procurement unit cost.

Senator NUNN. How many systems do you expect to breach the 25-percent baseline?

Answer. Of the 18 systems, 15 will breach the 25-percent threshold.

Senator NUNN. What are the systems in both categories and how much are the increases?

Answer. The FFG-7, Phoenix, and Maverick breached the 15-percent threshold. The systems breaching the 25-percent threshold are: Roland, Hellfire, Patriot, Pershing II, AH-64, SSN-688, F-14A, Sparrow, Trident Missile, 5-inch Guided Projectile, Sidewinder, F-15, F-16, A-10, and Defense Satellite Communication System.

EFFORTS TO MANAGE RISING COSTS

Senator NUNN. What specific efforts are being made to manage rising unit costs?

Answer. Preliminary information indicates that inflation and increased quantities are the primary reasons for most of these unit cost increases. With the new Defense commodity inflation factors portrayed in the fiscal year 1983 budget, we hope to significantly reduce the inflation component of future cost growth. In addition, our initiatives in the area of more realistic budgeting, program stability, multiyear procurement, preplanned product improvement, economic production rates, increased competition, and the other initiatives we have discussed in recent months are aimed at reducing future cost growth.

NATO RELATED ITEMS IN DOD PROGRAM

Senator NUNN. What does the fiscal year 1983 budget request reflect in terms of our NATO commitment? What initiatives and funding pluses and minuses are in the fiscal year 1983 program in respect to our NATO commitment? What programs are being changed and in what respect?

Answer. Selected major items in the fiscal year 1983 budget and fiscal years 1983-87 program of importance to NATO are outlined below. In reviewing this material it is important to recognize that for most programs there is no clearly defined dividing line between "NATO" and "Non-NATO" elements. Most force elements have more than one purpose and in any major confrontation with the Warsaw Pact all forces that could contribute would be made available. A portrayal of total funding in the fiscal year 1983 budget related to our NATO commitment will be provided—as in past years—in response to your question on the "Cost of the U.S. Commitment to NATO".

Artillery. The Army will continue to increase the density of 155mm self-propelled howitzers in its European-based artillery battalions. In fiscal year 1983, these battalions will be restructured from 18 to 24 howitzers.

M1 Abrams tank. The fiscal year 1982 program will increase the production rate from 30 to 60 tanks per month by November 1982; by January 1985, the production rate will increase to 90 tanks per month. By the end of fiscal year 1987, this accelerated schedule will enable the Army to procure 30 percent more M1s than previously

programed. This will allow the Army to equip fully 7 of its 10 active armored/mechanized divisions by the end of the program period.

The Bradley fighting vehicle system (BFVS). Our program will increase the production rate from 50 to 90 vehicles per month by the end of fiscal year 1986. By the end of fiscal year 1987, 6 of our 10 active armored/mechanized divisions will have the BFVS.

TOW missile system. The Army and Marine Corps will continue procurement of the TOW antitank missile with an improved warhead and guidance system [deleted]. Concurrently, existing missiles will be retrofitted with these improvements. The improved version will be capable of defeating advanced-technology armor.

Ships and submarines. Current projections show the deployable battle force will grow from 514 at end fiscal year 1982 to about 610 ships and the total operating inventory to about 640 ships by the early 1990s.

Land-based forces for sea-lane defense. We plan to modernize land-based fighter aircraft to strengthen our defenses against the SNA threat in the North Atlantic. With support from AWACs and British air defense forces, these aircraft will improve our ability to intercept SNA bombers attempting to attack naval forces and military shipping in the North Atlantic sea lanes.

Tactical air combat readiness. A high priority in the fiscal years 1983-87 program is to improve both near-term and long-term combat readiness and sustainability. We will continue to fund initiatives, begun in the fiscal year 1981 Budget Supplemental and fiscal year 1982 Budget Amendment, to eliminate peacetime operating spares deficits, reduce service maintenance backlogs, increase war reserve stocks (spare parts, ammunition, and support equipment) and increase flying hours.

Aircraft deployability. We have programed additional funds to begin construction of facilities to preposition aircraft support equipment, including materiel handling equipment and flight-line support vehicles, in Europe and Southwest Asia and to increase munitions and POL storage capabilities in NATO.

Combat aircraft procurement. We have programed funds to procure fighter aircraft at more efficient and economical rates. By fiscal year 1985, F-15 procurement is projected to reach 96 aircraft per year; by fiscal year 1986, F-16 procurement will rise to 180 aircraft per year. We also intend to continue procurement of both of these aircraft beyond fiscal year 1987. By fiscal year 1986, we will fully equip 40 tactical fighter wings (26 active and 14 ANG and AF Res wings). We tentatively plan to add four more tactical fighter wings in the out years, while continuing to modernize the current force.

Mobility programs. Fiscal years 1983-87 mobility programs will enhance our capability to meet our deployment objectives. Improvements in airlift, sealift, and prepositioning will yield a [deleted]. Meeting our long-term goal of concurrent deployments will require further increases in airlift and fast sealift, as well as additional prepositioning.

Expanding airlift capability. The Congressionally-Mandated Mobility Study (CMMS) has documented the need for additional airlift to meet our near-term and future mobility requirements. Our fiscal years 1983-87 program will provide much of the added airlift requirements identified by the CMMS, and it will do so as quickly as possible. The program procures additional C-5 and KC-10 aircraft and enhances the capabilities of the Civil Reserve Air Fleet (CRAF).

Prepositioned materiel configured to Unit Sets (POMCUS). Under the POMCUS program, we have prepositioned equipment in Europe for four Army divisions and numerous nondivisional supporting units. To meet our program objectives, two additional sets will be prepositioned. Construction of the fifth POMCUS site (in Belgium) began in October 1981 and work on the sixth (in the Netherlands) started in January 1982. Storage construction for both sets will be completed by the end of fiscal year 1983.

Fast sealift. The acquisition and conversion of high-speed (33 knots) SL-7 container ships will allow us to deploy Army units more rapidly. Funds were provided in fiscal year 1982 to complete acquisition of eight of these ships and to convert four of them for military use. We are requesting funds in fiscal year 1983 to convert the remaining four.

Marine Corps prepositioning. We have a Memorandum of Understanding with the Norwegian Government to preposition Marine equipment in Norway to assist in the defense of NATO's northern flank. Funds are included for procurement of initial increments of unit equipment, supplies, and ammunition for a Marine Amphibious Brigade.

[Deleted.]

Military construction program (MCP). In the fiscal year 1983 MCP, we have especially emphasized improving the living and working conditions for our troops in

Europe. The budget shows we plan an accelerated reduction of the real replacement and modernization backlog with emphasis on the replacement or modernization of medical treatment facilities, unaccompanied personnel housing, dependent schools, community support facilities, and operational and training buildings. We have directed 47 percent of the \$648 million European construction budget to alleviating unsatisfactory living and working conditions.

NATO infrastructure. In fiscal year 1983, \$375 million is required as our contribution to this multinational construction program to support the high priority initiatives of Theater Nuclear Force modernization and the Long-Term Defense Program. This funding level reflects our commitment to a strong and effective North Atlantic Alliance.

Family housing program. Our fiscal year 1983 military construction program includes \$2.7 billion for family housing. We are emphasizing improving the housing, particularly in Europe, by reducing the maintenance, repair, and improvement backlog. About \$400 million will be devoted to this purpose.

Longer range INF missiles. We will begin deploying Pershing II and GLCM in late 1983. The deployment of these systems will also permit greater flexibility in the employment of dual-capable aircraft (DCA), thus improving NATO's conventional war-fighting capabilities. Pershing II and GLCM deployments will significantly enhance deterrence by increasing NATO's capability to destroy fixed targets.

COST OF THE U.S. COMMITMENT TO NATO

Senator NUNN. In 1980 and 1981, the Defense Department provided the committee with updated information concerning the costs of the U.S. commitment to NATO for fiscal year 1974-fiscal year 1981. I know that the committee found this information valuable. It again would be helpful if you could (1) provide the same information for fiscal year 1983, (2) update the data for fiscal year 1981 and 1982, and (3) revise the constant dollar calculations to fiscal year 1983 dollars. I would also appreciate the same data using current dollars. Please use last year's format, categories, and definitions which are reflected in the charts you provided as depicted in page 61 of part I, DOD Authorization Hearings for Fiscal Year 1982.

Answer. We are now preparing this information and will forward the updated material to the committee as soon as it is available. [Information not received in time for printing.]

CHEMICAL WARFARE DETERRENCE.

Senator NUNN. What does the fiscal year 1983 and 5-year program reflect in terms of developing, producing and deploying binary chemical munitions and working to improve U.S. defensive capabilities?

Answer. The fiscal year 1983 program provides \$104 million for binary munitions: \$32 million for R.D.T. & E.; \$42 million for production facilities and equipment; and \$30 million for production of munitions. [Deleted.] The 5-year program for procurement of the binary munitions total some \$969 million in procurement funds. Binary related R.D.T. & E. funds are estimated to be less than \$200 million during this period. No deployment decisions have yet been made.

The fiscal year 1983 program provides \$508 million for chemical warfare defense; \$236 million for R.D.T. & E.; \$189 million for procurement; \$73 million in O. & M. funds, primarily for protective equipment, and \$9 million for construction. [Deleted.]

Senator NUNN. Does this represent any policy shift from the previous policies of "unilateral restraint" in terms of offensive chemical weapons?

Answer. The overall goal of a complete and verifiable ban on the development, production, and stockpiling chemical munitions has not changed. The United States will continue to exercise responsible restraint in this area and will make only those improvements necessary to ensure that the United States has a credible and effective retaliatory capability, as well as a defensive capability, both being necessary for deterrence.

Senator NUNN. When do you expect to make a production decision if this has not been done yet?

Answer. The fiscal year 1983 budget will request \$30 million in production funds.

STATUS OF ENHANCED RADIATION WARHEADS

Senator NUNN. What is the status of the enhanced radiation warhead in the fiscal year 1983 budget and 5-year program? What is the status of the special nuclear material production and warhead components necessary to convert warheads to ER

weapons? What is the status of any deliberations in the administration and with our allies on this system?

Answer. The following table shows Department of Defense costs for R. & D. and procurement of ER warheads. Costs are actual dollars, taking expected inflation into account. Operations and maintenance costs for the warheads are not included, since the weapons systems are dual capable.

	Fiscal year					
	1983	1984	1985	1986	1987	1988 +
Warhead:						
W70-3 Lance	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
W79-1 8-inch Howitzer:						
R&D (Millions of dollars)	0	0	0	0	0	0
Procurement (Millions of dollars)	14.4	11.7	2.8	0	0	0
Total	14.4	11.7	2.9	0	0	0

¹ No remaining DOD costs.

[Deleted.] The President decided on August 6, 1981, to produce the 8-inch and Lance ER warheads in a fully assembled ER configuration. The Department of Energy has planned for sufficient special nuclear material and warhead components to manufacture fully assembled ER rounds; thus, no conversion is necessary.

[Deleted.] Consequently, we have no plans at this time to deploy ER weapons outside U.S. territory [Deleted].

STRATEGIC PROGRAM

Senator NUNN. Last year you testified and the Department provided material which indicated the 5-year constant dollar costs of the overall strategic program was \$180 billion. Have there been any changes that would increase or decrease that estimate?

Answer. The direct cost to modernize and operate our strategic forces over the 6-year period fiscal year 1982-fiscal year 1987 was estimated in October 1981 to be \$180 billion in constant fiscal year 1982 dollars. There has not been a significant change to this total resulting from the fiscal year 1983 budget.

STRATEGIC PROGRAM COSTS

Senator NUNN. For example, what fiscal impact will a decision to use the ABRV (Advanced Ballistic Re-entry Vehicle) have over using the Mark-12A. I'm told the ABRV program is almost \$1 billion more. Has any such decision been made?

Answer. After a comprehensive 1-year review, the DOD has chosen the ABRV over the MK-12A. ABRV offers significant advantages in areas of military effectiveness, efficient use of nuclear material, warhead safety, warhead diversity, improved accuracy, improved hardness to nuclear effects, improved all-weather performance, and growth potential for higher yield. The additional cost to DOD in fiscal year 1982 dollars is \$881 million over the previous budget; however, it is likely that an additional \$259 million would have been required to upgrade the MK-12A if ABRV had not been selected. The net increase is, therefore, \$622 million. If the current yields are adequate, the actual additional cost to the Nation is much less because the cost to DOD is largely offset by savings in nuclear material production.

STRATEGIC ARMS CONTROL NEGOTIATIONS

Senator NUNN. In several of your statements before this committee last year, you indicated that we should not enter strategic arms negotiations "from a position of weakness."

When do you think the United States will have or will develop sufficient strength to engage in meaningful strategic arms control negotiations and what criteria are you applying to make this determination?

Answer. In testimony before this committee last year, we indicated that once it was clear to all that we were embarked on a program which would provide us with such capabilities, we would be in a position to pursue meaningful arms control, provided the international environment was conclusive. The necessary programs to redress the strategic imbalance are now underway and we are actively engaged in

preparations for the initiation of strategic arms reduction talks (START) when international conditions permit.

U.S. STRATEGIC NUCLEAR CAPABILITY IN NEXT 5 YEARS

Senator NUNN. Do you agree with Gen. Bennie Davis, Commander of SAC, who testified before this committee last year that the United States will go down in strategic nuclear capability over the next 5 years under the Reagan program? How does this square with your position?

Answer. On several occasions this administration has declared its commitment to the most cost-effective revitalization of the Nation's defense capability possible. In phasing out obsolescent and expensive components of the strategic force now and channeling the subsequent savings into the development, deployment and maintenance of more cost-effective and strategically useful systems, the President's modernization plan will increase our capabilities over the next 5 years when measured by factors which reflect actual military utility.

The program phases out two older systems which does result in a downward trend in some static indicators over the near-term period. We intend to conduct an orderly phase out of the B-52D bomber force between fiscal year 1983 and fiscal year 1986 and the Titan II ICBM force between fiscal year 1983 and fiscal year 1987. The 76 B-52Ds that are currently maintained are the oldest and least capable heavy bombers in the force. First delivered in 1956, these aircraft are expensive to operate and support, unable to carry stand-off weaponry, and vulnerable to Soviet defensive measures. The Titan II ICBM, like the B-52D, is expensive to maintain and contributes little to our strategic capabilities. First introduced in 1963, the 52 Titan II missiles currently in the force are a reflection of obsolete technology that in terms of accuracy, survivability, flexibility, and safety are ill-suited to the strategic environment of the 1980's and 1990's.

The decision to phase-out these two systems is based, therefore, on the fact that force effectiveness is not a static measure of weapons on hand in peacetime, but a dynamic measure of their actual mission utility, including their ability to survive enemy attack and fulfill the missions for which they were designed. In fact, according to calculations made not only by my office but by the Strategic Air Command as well, the effectiveness of our strategic forces will actually increase over the next 5 years under the President's modernization plan both in real terms and in relation to the proposal offered by the previous Administration.

QUESTIONS SUBMITTED BY SENATOR DAN QUAYLE, ANSWERS SUPPLIED BY HON. CASPAR WEINBERGER, SECRETARY OF DEFENSE AND GEN. DAVID C. JONES, CHAIRMAN, JOINT CHIEFS OF STAFF

CHEMICAL WARFARE DETERRENCE

Senator QUAYLE. Our understanding of the U.S. program to enhance our capability to conduct offensive chemical warfare operations is that the purpose of our program is to: (1) deter Soviet first use of such weapons; and (2) in the event of Soviet first use, to give the United States the option to respond in kind.

Is this understanding correct?

Answer. Yes, although our emphasis is upon deterrence by denying significant military advantage to the Soviets through both a defensive and retaliatory capability. Our retaliatory capability must be able to cause the Soviets equivalent degradation in combat effectiveness to that which we suffer; but that does not require matching the Soviets in number and types of chemical weapons/agents.

SCENARIO OF U.S. CHEMICAL WEAPON USE

Senator QUAYLE. Related to the above, it would seem that the most likely arena for U.S. retaliatory response would be in NATO, in a scenario in which the Soviets initiated a conventional war supported by chemical attacks. Yet our current posture seems to be to deter a conventional war in Europe by implying that NATO would employ tactical nuclear weapons in situations where Soviet conventional forces, with or without chemical attacks, are overwhelming NATO forces and proceeding to overrun all of Western Europe.

Considering the completely unfavorable public reaction to U.S. plans to acquire chemical offensive arms—which in large part comprises our ability to condemn Soviet treaty violations in Afghanistan and Southeast Asia, and considering that we have to employ tactical nuclear weapons in any event in response to Soviet conven-

tional attacks, one has to question the utility of the U.S. counterforce in the chemical area.

Would you comment on the above, and give representative scenarios for the use of U.S. chemical weapons?

Answer. The scenario you describe is a reasonable one, particularly considering the significant military advantage that the Soviets possess now in chemical warfare. Indeed, other potential theaters, [deleted] might also involve enemy initiation of chemical weapons, so we must also be able to deter chemical warfare in areas other than Europe.

We do not rely only upon nuclear weapons to deter war. We do rely on nuclear weapons in conjunction with conventional forces to deter war, but we do not regard nuclear strength as a substitute for conventional strength. Our conventional force is intended to and does deter war. If all deterrence fails and a conventional war begins, our conventional forces will prove a formidable foe, allowing policy makers options (to include tactical nuclear weapons) to favorably end the conflict.

Unfortunately, the conventional component of our deterrence to war is presently at a significant military disadvantage if chemical warfare is initiated. Therefore, the Soviets are encouraged to use chemical weapons in a non-nuclear conflict to negate our conventional forces. In other words, without an effective chemical warfare capability, our conventional force is not an effective deterrent to war as it could be, and our resources expended with that intent are inefficiently used.

Further, if one supposes that deterrence of non-nuclear or nuclear war should fail for any reason whatsoever, then it is still important that chemical warfare be deterred. The deterrence of chemical warfare is desirable both to avoid the military disadvantages our current forces would face and to avoid the indiscriminate harm that Soviet chemical munitions would cause to civilians.

These are two reasons that it is essential to deter chemical warfare by ensuring that an initiator does not have a significant military advantage. This can and should be done by having two capabilities: A chemical defensive capability to allow sustained operations in a chemical warfare environment even though degraded; and a retaliatory capability that ensures an initiator will also suffer degradation in combat effectiveness due to defending against chemical munitions.

RETAINING TITANS

Senator QUAYLE. The Titan force is admittedly obsolete and costly to maintain; yet, they force the Soviets to target against them, and to not target those missiles against other U.S. targets.

If the Titans are retained, approximately what Soviet ICBMs would logically be forced to be targeted against them (numbers of missiles and MIRVs)?

Answer. [Deleted.]

SOVIET COSTS

Senator QUAYLE. How do the costs to the Soviets for such targeting requirements compare with the costs to be saved by deactivating the Titans?

Answer. Deactivating the Titan force would save about \$500M during fiscal years 1983-87. Our methods for costing maintenance on small increments of the Soviet ICBM force are imprecise, but we estimate the Soviets would spend [deleted].

QUESTIONS SUBMITTED BY SENATOR STROM THURMOND, ANSWERS SUPPLIED BY GEN. DAVID C. JONES, CHAIRMAN, JOINT CHIEFS OF STAFF

Senator THURMOND. General Jones, given the increased role of the Guard and Reserve, what do you feel would be the proper amount of the Defense budget that should be delegated to them?

Answer. The resources requested in the Defense budget for Active forces and the Reserve Components are derived from total force requirements and the need for balanced capabilities. In fiscal year 1983, approximately 5.5 percent of the Defense budget will be devoted to the Guard and Reserve. In my view, this amount strikes the proper balance with other requirements for fiscal year 1983.

MODERNIZE INTRA-THEATER AIRLIFT FORCES

Senator THURMOND. In your testimony last year, you mentioned a need to modernize intra-theater airlift forces. In fiscal year 1982, the Congress added 12 C-130s to the DOD procurement. Is there still a shortage of inter-theater airlift?

Answer. Of the twelve C-130Hs procured in the fiscal year 1982 budget, eight were designated for the Air Force, Air National Guard. The remaining four were assigned to the Marine Corps Reserve as KC-130 tanker aircraft. Modernization of intra-theater assets remains a concern. In addition, there is a growing concern about intra-theater demand and capability. However, the requirement must compete with other higher priority needs.

ADD C-130HS FOR THE ACTIVE FORCES

Senator THURMOND. Would it be advisable for the Congress to add 36 C-130Hs for the active forces in fiscal year 1982 so that active units could be modernized? In turn, this would enable 36 C-130Es to fall out of the active force to modernize four Air National Guard and Air Force Reserve units and allow retirement of old worn out C-130As?

Answer. The budget as submitted represents a carefully worked out balance of priorities. Intratheater airlift is an important priority and I am concerned about existing shortfalls and aging; however, funds intended for other and possibly higher priority programs should not be diverted to purchase additional C-130s.

STATUS OF STEALTH BOMBER

Senator THURMOND. Much public attention has been given to producing the B-1B when the Advanced Technology Bomber will be ready in the 1990s. What is the status of the Stealth Bomber?

Answer. The Air Force has selected Northrop Corporation as prime contractor to proceed with research and development on advanced bomber concepts. Key members of the team include Boeing, LTV/Vought and GE Aircraft Engine Group. Initial efforts are to conduct design trades and address major risk areas before committing to a specific design. This pace will lead to an Advanced Technology Bomber Initial Operational Capability (IOC) in the early 1990s.

Senator THURMOND. General Jones, events in Southeast Asia have greatly renewed interest in binary weapons and the ability to fight and survive in a nuclear, biological or chemical environment. What is the capability for our personnel to fight and survive in such an environment with existing equipment?

Answer. Responding to the asymmetry between US and Soviet chemical warfare capabilities, the Services have emphasized improvements in equipment and training which enhance the ability of our forces to fight on a contaminated battlefield. Our forces today possess a marginal protective posture to survive chemical or biological attacks. The growing evidence of events in Southeast Asia and elsewhere certainly adds to the importance and urgency of these programs. During this same period the US has scrupulously observed its commitments under international conventions relating to chemical and biological warfare. While protection from direct and residual nuclear effects is difficult, adequate training, sufficient tactical warning, and force dispersal can reduce these effects.

QUALITY OF RECRUITS

Senator THURMOND. General Jones, I have a few questions about the All Volunteer Force. Are you satisfied with the quality of personnel that is being recruited?

Answer. The number of High School Diploma Graduate (HSDG) recruits increased significantly in fiscal year 1981 compared to the previous year: from 65 percent to 79 percent for males, and from 86 percent to 92 percent for females. Total Armed Forces Qualification Test Category IV accessions decreased from 31 percent to 18 percent.

These successes can be tied to several factors, among them lower accessions objectives in the Army (allowing for greater selectivity, pay and benefits packages), increased pay, enlistment incentive programs, increased recruiting efforts and employment opportunities, and a new spirit in the country. The nature of our military requirements and declining population of eligible young people portend difficulties ahead, and demand that we continue our efforts to attract and retain quality service members.

MINORITIES IN THE MILITARY

Senator THURMOND. A lot of attention has been focused on the large percentage of minorities in the Army. In a recent article in Foreign Affairs, Charles Moskos stated that the minority enlisted strength of the Army now exceeds 40 percent of the total. Do you feel that it is sound to ask the minorities to bear a disproportionate share of the Defense burden?

Answer. Let me preface my response to saying that the Charles Moskos article overstates the actual percentage of minorities in the Army. The article also makes the point that there is no requirement that the makeup of the enlisted ranks be perfectly calibrated to the social composition of the larger society. I recognize that a cross-sectional representation in the military is desirable, but feel that this impetus must come from within society itself rather than through artificial constraints.

The Services do not impose a ceiling on the number of minorities that can be recruited. Minority personnel are voluntarily expressing a prerogative in electing military service. I would not consider it sound judgment to impose minority ceilings any more than a responsible government would consider it sound judgment to impose such ceilings on the civil sector.

F-16S TO THE ANG

Senator THURMOND. General Jones, I am pleased to be informed that the South Carolina Air National Guard is the first such tactical fighter unit to be equipped with the F-16. The 169th at McEntire Air National Guard Base is an experienced unit and will be a credit to the active Air Force and the Guard. I am also pleased to see that the fiscal year 1983 budget designated an additional 20 F-16s to be assigned to the Air National Guard. Will this second Air National Guard unit of F-16s be assigned to the tactical fighter or manned interceptor mission?

Answer. The 120 F-16s procured in the fiscal year 1982 budget will permit the equipage of the first Air National Guard (ANG) tactical fighter unit at McEntire ANGB of fiscal year 1983. No other ANG units are programmed to convert to the F-16 thru fiscal year 1986. However, the Air Force is examining the feasibility of replacing the five ANG F-106 units with F-16s in fiscal year 1987 and fiscal year 1988.

RESERVE PHYSICIAN INCENTIVE PAY

Senator THURMOND. General, last year Congress passed an incentive program for the active components physicians and surgeons. There is still a shortage of doctors in the Guard and Reserve forces. Would you support incentive pay for Doctors in the Guard and Reserve forces?

Answer. The Army has been asked by OSD to evaluate the effectiveness of the incentive program for the Active Component physicians and surgeons. This evaluation has not been completed and the findings may have an impact upon the applicability of such a program for Guard and Reserve forces. A Reserve incentive program is also under study within OSD (Health Affairs).

The shortfall of Reserve Component physicians is a matter of concern. It is hoped these studies will provide a basis for steps to reduce this shortage.

QUESTIONS SUBMITTED BY SENATOR STROM THURMOND, ANSWERS SUPPLIED BY HON. CASPAR WEINBERGER, SECRETARY OF DEFENSE

INFLATION

Senator THURMOND. Mr. Secretary, the inflation rates that are projected for the defense budget have a great impact on the amount of equipment that can be procured. An error of just one percentage point in the inflation rate estimate can result in a difference of several billion dollars. How accurate do you feel that your inflation rate estimate is for the fiscal year 1983 budget?

Answer. The rates used to price major commodity procurement—Aircraft, Missiles, Weapons, and Ships—are based on economic events affecting those industries actually providing goods and services for military use. The remaining portion of our request is priced to reflect achievement of the Administration's overall economic goals. We believe this is a good first step in the direction of correcting this situation.

INFLATION RATES

Senator THURMOND. What inflation rates are you projecting for the next five years?

Answer. Our composite outlay pay and price assumptions are as follows: 1983, 6.9 percent; 1984, 5.9 percent; 1985, 5.5 percent; 1986, 5.1 percent; and 1987, 5.0 percent.

GUARD AND RESERVE

Senator THURMOND. In 1973, the Secretary of Defense issued a memorandum stating that "Total Force is no longer a 'concept'. It is now the Total Force Policy which integrates the Active, Guard and Reserve forces into a homogeneous whole." The Guard and Reserve now make up half of the Total Force, yet they receive only a fraction of the defense budget. What portion of the fiscal year 1983 budget is dedicated to the Guard and Reserve?

Answer. Approximately 5 percent of our fiscal year 1983 TOA request is for the Guard and Reserve.

Senator THURMOND. Who was the spokesman for their interests in your budget preparation?

Answer. I expect all of my staff to be concerned about the resources required to assure the readiness of the Reserve Forces. The specific responsibility for overseeing Reserve Component interests in my office is assigned to Dr. Lawrence J. Korb the Assistant Secretary of Defense for Manpower, Reserve Affairs and Logistics and to his Deputy For Reserve Affairs, Dr. Edward J. Philbin.

GUARD AND RESERVE MANPOWER

Senator THURMOND. Mr. Secretary, last year you stated before this committee that the manpower situation of the Guard and Reserve was a priority concern for you. What changes have taken place during the last year in this regard?

Answer. In the past fiscal year, the strength of the Selected Reserve increased 48,000 personnel with the Army Components accounting for 41,000 of that growth. All of the components exceeded their objective.

In the area of pretrained manpower, the Individual Ready Reserve increased for the third year in succession. Since the end of fiscal year 1978, the IRR has grown approximately 63,000 with 6,000 of that growth in fiscal year 1981.

IMPROVEMENT OF GUARD AND RESERVE MANPOWER

Senator THURMOND. What ideas do you have for improvement of the situation?

Answer. The trend in the Selected Reserve is favorable and we anticipate that continuing our current programs and increasing efforts to combat attrition will resolve the shortfall.

In focusing our attention on the Selected Reserve units, the IRR did not receive adequate attention. To correct this shortage, a concerted effort will be required. A long-term solution to the shortages of pretrained individuals would be to increase the length of the military service obligation which is currently 6 years. A proposal being considered within DoD would increase this obligation up to 8 years. The amount of time served on active duty or in the Selected Reserve would not be affected but the time served in the IRR before normal discharge would be extended. This change would produce the manpower needed. However, it would take 6 years before any strength gains were obtained. During the interim period, the use of other initiatives and incentives are necessary to generate strength increases.

An enhanced IRR reenlistment bonus program appears to possess the greatest potential for significantly increasing IRR strength. A proposal is being developed that would reinstate and improve the IRR reenlistment bonus that was tested during fiscal year 1981. This bonus provides an incentive for personnel to continue to serve in the IRR who may otherwise elect discharge.

Another initiative is the direct enlistment option that the Army will begin in fiscal year 1983. This program will provide for individuals to join the Army, attend initial training, opt for service on active duty or in the Selected Reserve, or return to the IRR to complete their military service obligation. A modest enlistment bonus for this program is proposed. Extended IRR service would require some refresher training periodically for skills to remain proficient.

Proposal currently being considered would open eligibility for Servicemen's Group Life Insurance (SGLI) to members of the IRR. These members of the Ready Reserve are subject to recall during a national emergency but are presently excluded from participation in this program. Since premiums would be paid by the individual concerned, it would be essentially a no-cost program to the Government.

This integrated program would resolve the mobilization manpower shortages by the late 1980's primarily through the use of an extended service obligation. Bonus programs and group life insurance for the IRR would assist in reducing the shortfall during the interim period.

PERSIAN GULF STRATEGY

Senator THURMOND. Mr. Secretary, I would like to read to you a quotation from a statement by President Carter, "Let our position be absolutely clear: An attempt by any outside force to gain control of the Persian Gulf region will be regarded as an assault on the vital interests of the United States of America, and such an assault will be repelled by any means necessary, including military force." Is this still the position of the United States Government?

Answer. The Reagan administration shares the concern of the previous administration for the vital resources of the Persian Gulf region and the threat posed to this region by Soviet aggression which could be carried out directly or through proxies. In addition to the military components, our overall strategy for Southwest Asia includes diplomatic and economic measures. The Reagan administration has vowed to promote stability in the region and to limit external hegemony. While diplomatic and economic initiatives are, of course, preferable instruments to realize these objectives, we must recognize that, without developing military capabilities and planning for the use of force, we can neither deter aggression nor defend our interests.

RDF FORCE SIZE

Senator THURMOND. What size force are we currently capable of deploying to the Persian Gulf on short notice?

Answer. Our capability to deploy forces to Southwest Asia depends in part on factors which are not directly related to the calculation of required vs. available lift capability. Assuming that such a deployment would proceed unchallenged, that the sea lanes would remain open, that our enroute base structure would be available and that our forces would not suffer attrition during the deployment, by the end of fiscal year 1982, we should be capable of deploying and sustaining a force of 2½ Army divisions, 1½ Marine Amphibious Forces, four Air Force tactical wings and three Navy carrier battle groups. The time required to deploy this force would vary between approximately 35 and 45 days depending on whether the deployment is made using partial or full mobilization strategic lift assets.

Senator THURMOND. How many divisions do the Soviets have in areas contiguous to Iran?

Answer. [Deleted.]

Senator THURMOND. How do you equate our capability in the region versus that of the Soviets?

Answer. [Deleted.]

LONG-TERM MX BASING

Senator THURMOND. Mr. Secretary, let me turn to the subject of the MX missile. The final decision on the basing mode is yet to be made. What developments have arisen in each of the various modes of basing under consideration?

Answer. In the area of ballistic missile defense, the Air Force and Army are working together through the Executive Committee to identify viable options on which to place emphasis over the next year. The deep basing program plan is in the final stages of development and will be presented to the OSD staff in March. Continuous Patrol Aircraft (CPA) is not being studied because of the Congressional prohibition in the Authorization Conference Report against using fiscal year 1982 funds for work on air-launched basing modes.

SOVIET WARHEAD ACCURACY

Senator THURMOND. Is it safe to assume that Soviet warhead accuracy will continue to improve throughout the 1980s?

Answer. Yes, sir.

CONTINUED SOVIET ICBM IMPROVEMENT

Senator THURMOND. What effect will this have on the window of "vulnerability"? Answer. The window of vulnerability that you refer to is comprised of four areas of serious concern. These areas, in order of priority, are:

1. The vulnerability of our strategic C³ network. This is of primary concern because it seriously diminishes the effectiveness of all of our strategic forces.
2. The prelaunch survivability of our B-52 force because it undermines the utility of our cruise missiles and, most serious, it creates a very dangerous incentive for a Soviet surprise attack.

3. The vulnerability of our ICBM force because it creates an incentive for the Soviets to strike first in a crisis.

4. The gross imbalance in strategic defense because it severely weakens our deterrence posture.

We are working to mitigate these problems in their order of priority. Our overall package for strategic force modernization will negate the continued improvement in Soviet accuracy and reverse adverse trends in the current strategic balance.

PREFERRED LONG-TERM BASING MODE

Senator THURMOND. Mr. Secretary, which basing mode are you inclined to favor for the MX?

Answer. We presently do not have a preferred long-term basing option. We view deep basing, continuous patrol aircraft and ballistic missile defense with equal weight. It is clear that each has its strengths and weaknesses and these, along with their technological implications, will be explored to supply data for the basing decision of 1983. That decision will provide the go-ahead for one or even possibly more of these basing options for development.

ALL VOLUNTEER FORCE

Senator THURMOND. The All Volunteer Force has been a topic of considerable debate since its inception. There has been a great deal of discussion about the quality of recruits and about the large cost of maintaining the All Volunteer Force. I have some questions about these costs. In the fiscal year 1983 budget, how much money is being spent on advertising for recruiting purposes, to include television, radio and printed material?

Answer. The amount of resources requested for the Active and Reserve Force advertising campaigns in fiscal year 1983 is \$175.3 million.

Senator THURMOND. What is the total estimated cost of the Volunteer Force if advertising costs, salaries of recruiters, who could be filling shortages in the various Services, and any other contributing costs are counted?

Answer. The cost of the All-Volunteer Force can only be answered when a comparison is made to an alternative (e.g., what is the cost savings resulting from a return to the draft).

A return to the draft may result in little or no savings to the Federal Government and, in certain circumstances, could be more costly. It would merely transfer part of our manpower cost from the Federal budget to an unbudgeted tax on those we would draft. In order to completely determine the resources saved one must also consider several variables such as: reduced first-term pay, pre-AVF GI Bill benefits as well as increases in Federal/state welfare and unemployment payments. We estimate the annual DoD budget near-term savings that would result from a return to an active force draft would be about \$600 million.

JAPANESE DEFENSE BUDGET

Senator THURMOND. Mr. Secretary, the defense budget of Japan is currently less than 1 percent of their GNP. What do you feel is an adequate percentage of their GNP to fulfill their defense obligation?

Answer. An adequate defense budget of Japan is one which allows accomplishment of the missions which the Government of Japan is willing to undertake. Japan's Prime Minister has stated that his Government can legally defend Japan's territory, its surrounding seas and skies, and its sea-lanes to 1000 miles. We agree with this role for Japanese forces in a division of labor with the United States. The requisite percentage of GNP necessary to achieve this level of capability will be calculated by the Japanese Government as is appropriate for a sovereign nation.

QUESTIONS SUBMITTED BY SENATOR JOHN C. STENNIS, ANSWERS SUPPLIED BY HON. CASPAR WEINBERGER, SECRETARY OF DEFENSE

STRATEGIC MODERNIZATION PROGRAM

Senator STENNIS. Mr. Secretary, between 1983 and 1987 your program calls for spending about \$180 billion on the maintenance and modernization of our strategic forces. This represents more than a 20% spending increase over the previous administration. Yet it is not apparent that the impact of this increased spending is reflected in our strategic force structure or capabilities. In 1987 there will be no more Trident submarines and no more strategic missiles at sea than planned by the previous

administration. While hopefully you will have replaced two of our squadrons of B-52s with two squadrons of B-1s, the program will have eliminated our entire Titan missile force. In addition, by placing MX missiles in Minuteman Silos while deferring a decision on survivable basing, the program will have accomplished nothing to increase the survivability of our land based missile force.

Would you explain how this strategic program will reduce the window of vulnerability by the end of the 5-year period and how it relates to the Administration's overall view of the strategic balance?

Answer. In developing an integrated strategic program founded on the objective of deterring nuclear war and that would redress the current imbalances, the Administration faced several fundamental choices.

The most important choice was whether to match the enormous destructive power of the Soviet nuclear arsenal or to focus on improving survivability and endurance of the U.S. forces. Our decision, that the major thrust of our program will be survivability and endurance, was influenced by several factors:

Instability (incentive to strike first in a crisis and incentive for surprise attack) is substantially reduced.

We can redress imbalances at less cost and with fewer nuclear weapons.

Should deterrence fail, a conflict would limit itself to a lower intensity.

The resulting posture is more conducive to negotiated reductions. [Deleted.]

We are concerned that deterrence has heretofore consisted of but a single barrier which, once breached, fails catastrophically with widespread destruction within the United States. Deterrence rests on a fabric of unanswerable questions and will be particularly tenuous until parity is restored. As a result of this concern, we have sought to expand deterrence as a multiple barrier which, if it fails, would degrade gracefully and give us the greatest possible opportunity to limit damage, particularly to our cities. Hence, a major thrust of our program is endurance of our forces.

With this emphasis the changes are less visible. However, the qualitative changes directly impact the strategic balance and produce a trend toward parity in the long-term. Although M-X in Minuteman silos does not immediately increase the survivability of our land-based missile force, the program, including its budget, continues alternative options for the long-term survivability. We intend to choose among those options in mid-1983. Additionally, the B-1B is not simply a restart of the program cancelled in 1977. We intend to introduce this aircraft as an enduring system employed in such a manner as to capitalize upon its ability to be reused.

NUCLEAR UMBRELLA

The attached series of charts reveal that a significant imbalance relative to the Soviet strategic nuclear capability has developed through their initiatives while we exercised restraint. We are concerned that this margin of superiority will provide them a "nuclear umbrella" under which they can stalemate our conventional capability much as the U.S. nuclear umbrella of the 60's permitted us to stalemate Soviet conventional capabilities. The "Window of Vulnerability" is best illustrated in the attached charts. These display the U.S./USSR strategic nuclear strength that would exist following an attack by one side and a response by the other. A fundamental assumption is that the exchange of strikes is primarily against the other's military capability. As a result, the charts provide a measure of weapons remaining by either side for other attack options (strikes against cities in addition to military forces or for subsequent strikes).

Figure 1 shows the difference in residual strength between the U.S./U.S.S.R. using "Equivalent Warheads" as a measure of merit. This measure takes into consideration features of the weapon (yield, accuracy, etc.) and matches them to characteristics of the remaining targets (hardness, area, etc.). Trends from 1983 through 1990 are presented for three situations for both the Carter and Reagan programs. The greatest advantage is gained by the Soviets if they initiate a surprise attack and is shown by curves A and A¹. Curves B and B¹ illustrate the situation in an international crisis and the Soviets strike first when we are prepared. The differences between curves A and B and A¹ and B¹ are measures of the incentive for the Soviets to attempt a surprise attack. Curves C and C¹ present the case where the U.S. strikes first during an international crisis. The difference between curves B and C therefore represents the incentive for either the United States or the Soviets to strike first in a crisis. It can therefore be considered as a measure of crisis stability. In every case, the curves lie on the side of parity, where the Soviets have the advantage. The Reagan program provides an improved trend toward parity reduces the incentive for a surprise attack and improves crisis stability. This is achieved pri-

marily through improvements in the resiliency of our command and control systems and by taking advantage of the reuseability feature of an enduring manned bomber.

Figure 2 illustrates the improvement which can be achieved if the M-X is deceptively based in silos and defended by an ABM system. Curves A, B, and C are the Reagan program. Curves A¹, B¹, and C¹ are for the defended case with the assumption that the ABM IOC is [deleted] and FOC of [deleted] interceptors is [deleted].

Figure 3 presents the same data of the previous two charts for the situation in which the Soviets initiate a surprise attack at one point in time, i.e., 1990, but provides a comparison of different measures of merit. SNDV=Strategic nuclear delivery vehicles; Weapons=Numbers of warheads; Megaton=Total remaining megatonnage; and Throw Weight=Total remaining payload delivery capability in pounds. As can be seen, SNDV's provide the most favorable comparison from the U.S. point of view and Throw Weight the most pessimistic.

Figure 4 illustrates that immediately after a Soviet attack, our current forces are severely drawn down because of survivability problems (curve A). However, many surviving weapons lose their command and control connections with the National Command Authority (curve B). Furthermore, many surviving weapons lose their utility as time progresses due to the loss of supporting systems. For example, if Minuteman loses commercial power, it is capable of continuing operation for a few days on battery power. The impact of these conditions is illustrated in curve A. As a consequence, the National Command Authority would find that it must respond immediately to an attack or lose the capability to do so. This may not be appropriate for the situation.

The Reagan plan rectifies this situation by providing enduring and/or reconstitutable systems. It is this feature which makes the profound changes in the strategic imbalance.

POST-EXCHANGE IMBALANCE

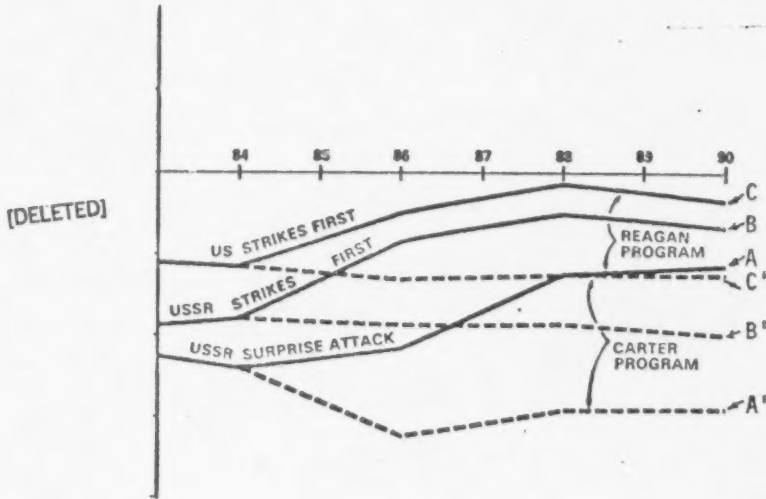


Figure 1

POST EXCHANGE IMBALANCE

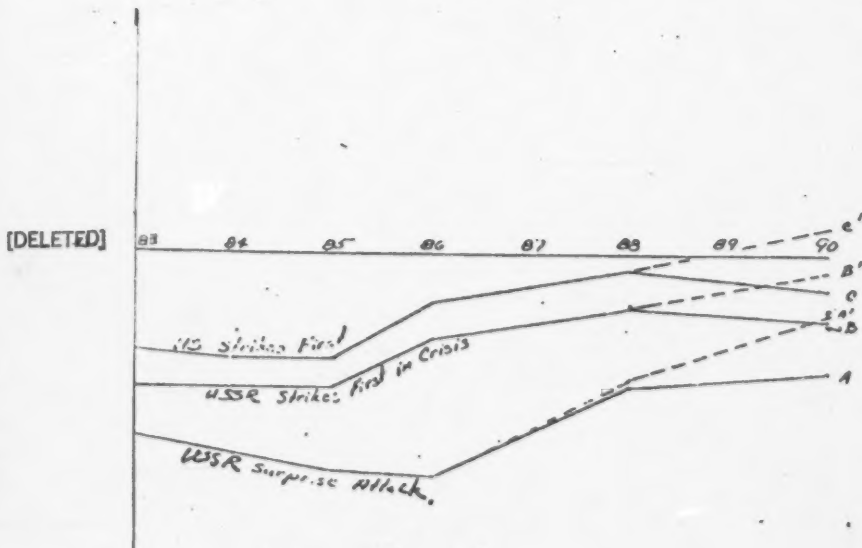


Figure 2

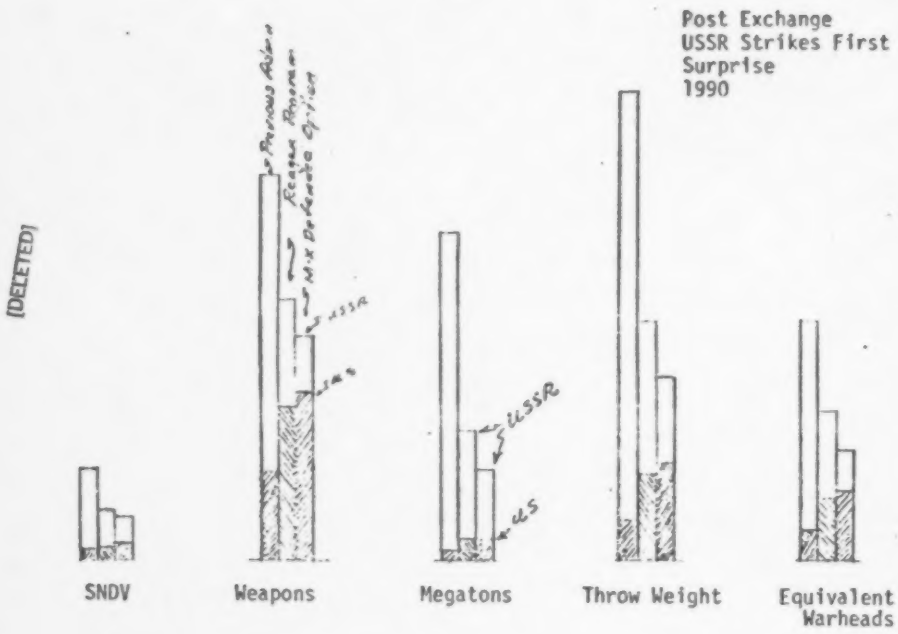


Figure 3

[DELETED]

TRIDENT II BACKFIT

Senator STENNIS. Mr. Secretary, what is the likelihood that the retrofit of Trident II missiles onto Trident submarines, requiring modification of both the launch tubes and the fire control system, could require a much longer period of time than presently projected.

Answer. The backfit of Trident II missiles into Trident submarines has been tentatively planned for 12 months. The exact duration has yet to be determined and is dependent upon the specific weapon system configuration selected and its impact on existing Trident submarine subsystems.

LAUNCH UNDER ATTACK

Senator STENNIS. Mr. Secretary, Officials from both this Administration and the previous Administration have testified that silo-based missiles have become vulnerable to Soviet attack; indeed, some have estimated that as few as 10 percent of the silos might be expected to survive. What, then, is the purpose of deploying some 40 M-X missiles in silos, even as an interim measure? If we are willing to make a major investment in M-X missiles (in terms of development and production), and then place them in a basing mode already greatly at risk, does this not imply an increase in dependence on a policy of "launch under attack?"

Answer. As part of their sustained and dramatic build-up of strategic forces, the Soviets have been further upsetting the previous strategic balance by increasing the hardness of many of their important facilities. We are thus losing the capability to threaten significant resources and we believe that loss is destabilizing for it may encourage Soviet adventurism and even prospects for coercion. The capabilities of the M-X missile help to redress that imbalance and we are determined to deploy those missiles as soon as they are available in 1986. Unfortunately, we will not be able to base those initial missiles in a truly survivable basing mode, but no one should misinterpret that circumstance to mean that we intend to rely on the launch under attack or launch on warning concepts. We have repeatedly made clear that we are not relying on launch under attack as a solution to ICBM survivability. We have also made clear that the Soviets cannot ignore our capability to do so and that they must account for it in their own calculations.

RESERVE FORCES

Senator STENNIS. Mr. Secretary, last year the Committee recommended a plan to acquire equipment for the Army National Guard. Of the equipment proposed in the plan—estimated to cost \$400 million—what is included for the Army National Guard in fiscal year 1983 and subsequent years in the 5-year Defense Program?

Answer. Procurement requirements for the National Guard are an integral part of the Total Army requirements generation process as the budget for a given fiscal year is developed. Distribution of equipment to both active and Reserve Components is made 2 to 3 years after procurement funds have been allocated by Congress. Distribution of equipment is based upon priorities in existence at the time items are received, with the exception of dedicated procurement as specified by either Congress or the Army. Also, the February 15, 1982 Annex to Volume II, Force Readiness Report, being submitted to Congress required by the fiscal year 1982 Defense Appropriations Act, describes in detail exactly what equipment is going to the National Guard as a result of procurement and other distribution actions for the fiscal year 1982-85 timeframe.

MANPOWER COSTS

Senator STENNIS. In recent years, the emphasis on investment programs has brought a slight decline in the percentage of the Defense budget related to manpower. However, Manpower costs still account for almost 50 cents of every \$1 spent on national defense—over \$90 billion during the current fiscal year. Can we really afford the high investment costs needed for modernization when manpower costs remain so high?

Answer. Yes. We need to continue to improve all aspects of our Defense posture through increased spending on military hardware, operations and maintenance, and research and development. However, this modernization effort cannot be accomplished at the expense of the manpower portion of the budget. The sharp restraint on manpower costs during the decade of the 1970's resulted in severe recruiting and retention problems and we do not want to repeat those mistakes. We will take actions where we can to control manpower costs, but we also realize that if we are going to attract and retain the military personnel necessary to meet our manpower

requirements, we will have to maintain competitive pay and incur other personnel costs that make service life attractive.

SAVINGS BY ELIMINATION OF WASTE, FRAUD, AND MISMANAGEMENT

Senator STENNIS. Secretary Weinberger, during your confirmation hearings last year you stated, in response to a question by Senator Jackson:

"My preliminary impression * * * is that in any organization that has \$160 billion, there has to be some opportunity for savings. I would want to try to find those, and obviously savings that certainly do not affect in any way the effectiveness of our forces or the strength of our forces."

First, let me ask you if your impression was correct and your search was successful? How much in savings were you able to make last year as a result of the Carlucci initiatives or other efforts? In what areas and in what amounts were these savings achieved?

Answer. We have undertaken a major campaign to eliminate waste, fraud and mismanagement in the Defense Department during 1981 and particularly through the fiscal year 1982 and fiscal year 1983 budget reviews. This effort at management reform and the utilization of better acquisition practices have netted the Department \$500 million in fiscal year 1981 and will net an additional \$4.3 billion in fiscal year 1982.

In fiscal year 1981, \$51 million was saved through pay adjustments, more than \$167 million was saved through the application of the Carlucci initiatives and other efforts to reform the acquisition process, and over \$260 million through efficiencies in management operations. In fiscal year 1982, the Department will save more than \$2 billion through pay adjustments including \$1.7 billion through the civilian pay cap and more than \$100 million through the retired military pay cost of living adjustment. Additionally, \$1.3 billion will be saved through acquisition initiatives such as contracting at more economical rates of production, purchasing lower cost alternative programs without sacrificing quality, and by eliminating or reducing a number of programs in fiscal year 1982. Nearly \$1.0 billion will be saved in operations including the curtailment of travel and consulting and related services, as well as reducing marginal operations programs such as audiovisual activities, and implementing other personnel efficiencies.

ECONOMIES AND EFFICIENCIES

Senator STENNIS. Second, this year the Department of Defense will get nearly \$260 billion—almost \$100 billion more than you mentioned last year—so I presume your opportunities for savings will be that much greater. With that in mind, let me ask you the following:

a. What level of savings in the fiscal year 1983 budget are you claiming? In what areas or programs were these savings achieved?

Answer. In 1983, the Department of Defense will save over \$7.3 billion. This will include nearly \$4 billion for pay adjustments: \$2.8 billion through the civilian pay cap, \$250 million in retired pay cost of living adjustment, and \$858 million through reversal of proposed reforms to the military retirement system. There will be a savings of \$2.3 billion in the area of acquisition, including more than \$575 million through more economical rates of production, \$125 million through the increased use of multiyear contracting, and more than \$500 million in other areas of acquisition improvements such as productivity enhancements, increased competition, and lower cost alternatives. There will also be nearly \$950 million in operational savings including more than \$350 million in reductions to administrative overhead, nearly \$100 million in logistical support improvements, more than \$125 million through productivity improvements, \$140 million in reductions in marginal programs, and more than \$200 million through other operations improvements such as base realignments, base support consolidation and reduction of marginal equipment.

Senator STENNIS. Do these savings represent a reduction from the level for fiscal year 1983 Defense outlays, presented to the Congress in the Administration's fiscal year 1982 amended Defense budget request?

Answer. These TOA savings and reduction in outlays for 1983 are now higher than the fiscal year 1983 TOA savings and outlay reductions presented in the fiscal year 1982 amended Defense budget request.

Senator STENNIS. How much of these savings that you are claiming over the last two years were mandated by Congress and how much was the result of internal DOD initiatives?

Answer. It is difficult to state exactly how much of these savings was mandated by Congress over the last two years and how much was the result of internal DOD

initiatives. In several cases Defense Department initiatives coincide with the expressed direction of the Congress, while in other cases the Department has implemented totally or in part the program modifications recommended by the various congressional committees. For the most part, these savings reflect the result of internal DOD initiatives.

However, the point that needs emphasizing is that regardless of where the suggestions for savings originate, Congress and the Defense Department both share the same objective of increasing our military might but doing so in the most cost-effective manner possible.

To get back to a more specific response to your question, the following items included in our numbers relate to areas of savings that the Congress has addressed in the last two years.

DINING HALL CONTROLS

The House Appropriations Committee (fiscal year 1982 House Report, page 17) cited Defense audit reports documenting a total of at least \$100 million in subsistence that is lost through waste, fraud and abuse. The report states that "These audits document the very poor control of mess passes, poor mess hall head counting, foreign personnel not being charged for food eaten, excessive subsistence stockage, free issuance of flight meals to unentitled personnel, excessive number of dining facility attendants, and inadequate dining facility cash control procedures." The House deleted \$100 million from the defense budget and indicated that a savings of this magnitude is possible without adversely impacting the subsistence entitlement. The House and Senate Conferees subsequently agreed to a lesser reduction totaling \$26.5 million.

While the Department is committed to vigorously pursuing improvements and savings in these areas, it is not possible to achieve savings of the magnitude identified by the Congress. It is estimated that savings of approximately \$5.7 million in fiscal year 1982 and \$13.3 million in fiscal year 1983 can be realized through the tightening up of head count procedures and better control over meal cards. These savings have been included in our budget request and have also been extended throughout the program period.

CONSUMABLE ITEM MANAGEMENT

The House Appropriations Committee (fiscal year 1982 House Report, page 71) recommended that the Department proceed with transfer of all consumable item management (1.3 million items) to DLA without further delay. The Committee further noted that the Deputy Secretary of Defense has already directed transfer of 200,000 items. The fiscal year 1982 budget requests was not reduced by the Congress for this program.

The Department shares the Committees view that savings are possible by this action which will save an estimated \$15.0 million per year. The effects this transfer will have on mission performance and readiness will be studied to determine whether additional items could be transferred in the future.

TRAVEL REDUCTION

The fiscal year 1982 Budget Reconciliation Act provides for a \$100 million reduction in travel expenditures Government-wide from the amounts requested in the budget submitted by the President on January 15, 1981. The DOD share of this reduction was \$20 million. The reduction was incorporated into the fiscal year 1982 Budget amendment representing an offset to items identified for readiness requirements. This reduction was taken in the area of administrative travel. However, further significant travel cost savings and avoidances have been identified during our fiscal year 1982 review.

DOD has identified a total of over \$500 million fiscal year 1982 through fiscal year 1987 of reduced travel as well as reduced travel costs.

HEADQUARTERS MANAGEMENT

The fiscal year 1982 Senate Appropriation Committee Report (page 59) effected a reduction in fiscal year 1982 in recognition of proposals made regarding consolidation of the U.S. Readiness Command and subordinate activities. This resulted in a reduction of 150 civilian and \$3.7 million which was extended into fiscal year 1983 and the outyears. This action combined with other internal initiatives is projected to save \$7.4 million in fiscal year 1982 and \$11.6 million in fiscal year 1983 and out-years for Air Force management headquarters.

EFFICIENCY REVIEWS

Many commercial type activities are exempt from contracting out under OMB Circular A-76. However, Congress recommended that the efficiency reviews required for activities being studied for contracting out be extended to exempt activities as a means of achieving savings. The \$2 million reduction levied against DCA program in fiscal year 1982 will be achieved through more efficient operations. The Department has initiated plans to greatly expand the efficiency reviews which are expected to result in future savings.

CONSULTANTS AND STUDIES

The fiscal year 1982 Budget Reconciliation Act provides for a \$500 million reduction in the total Federal Government programs for Consultants, Studies, Management and Professional Services from the amounts requested in the Budget submitted by the President on January 15, 1981. The reduction made in these areas by the Department of Defense and claimed as Efficiencies and Economies represent this Department's portion of the overall reduction for fiscal year 1982. However, this administration was giving strong emphasis to reducing this area. For fiscal year 1982, the reductions were incorporated into the Budget Amendments for fiscal year 1982 representing offsets to the readiness requirements identified by the Administration. Furthermore, significant savings in this area has been extended into the outyears as a result of the intensive review made in fiscal year 1982. As the DoD represents approximately 35 percent of the total government budget for this type of cost, the DoD portion of the \$500 million would equate to \$175 million. Since the reduction made by DoD was \$282.3 million, the balance of \$107.3 million represents savings beyond that which was mandated in the Budget Reconciliation Act. The extension of these reductions into fiscal year 1983 through fiscal year 1987, which was not mandated by the Congress, results in savings of approximately \$1.4 billion over that period.

Senator STENNIS. Mr. Secretary, on November 18, 1981, President Reagan put forth the so-called "zero option" as the U.S. negotiating position in talks with the Soviets on Theater Nuclear Forces in Europe. Under this option the U.S. would forego planned European deployment of Pershing II missiles and ground launched cruise missiles scheduled to start in December 1983 in return for Soviet dismantlement of certain intermediate range ballistic missiles (SS-20s, SS-5s and SS-4s) in Eastern Europe. The Soviets countered with a proposal to freeze SS-20 deployments, perhaps moving some to the east of the Ural Mountains, and perhaps reducing the number of older SS-5 and SS-4 missiles. The TNF negotiations commenced in Geneva on November 30 and have now resumed after a holiday break.

With this background let me pose the following questions:

Did the Department of Defense participate in the development and support of the "zero option" proposal? Did the Joint Chiefs of Staff?

Answer. With regard to the Geneva-based negotiations with the Soviet Union on limitation of intermediate-range nuclear forces, the Department of Defense, together with the Joint Chiefs of Staff, participated fully in the development of our negotiating position. Both organizations believe that the position we have taken represents an equitable outcome which would enhance the cause of peace and security.

DOD REPRESENTATION IN GENEVA

Senator STENNIS. Is there a representative of the Defense Department and/or the Joint Chiefs of Staff on the negotiating team in Geneva? If so, who is it?

Answer. The Department of Defense is represented in Geneva by both Mr. John A. Woodworth, from the Office of the Assistant Secretary of Defense for International Security Policy, and the Joint Chiefs of Staff Representative, Brig. Gen. William F. Burns.

BATTLEFIELD NUCLEAR WEAPONS

Senator STENNIS. Are battlefield nuclear weapons such as our nuclear artillery shells—within the scope of these discussions? If not, why have they been excluded?

Answer. It is sound arms control practice to establish priorities at the outset of negotiations; hence, the focus of these negotiations is on those systems which both sides recognize as the most threatening—long-range land-based missiles. Success in these negotiations would create a constructive framework and could generate momentum for negotiations on other systems.

IMPLEMENTATION OF INF MODERNIZATION

Senator STENNIS. Assistant Secretary of Defense Richard Perle told this Committee on December 1, 1981 that "if we are not (successful in Geneva) we shall implement fully NATO's decision to respond to the Soviet deployment of SS-20 missiles, of which there are now some 270 deployed, each with three warheads, by the deployment of 572 ground-launched cruise and Pershing II missiles."

Are we going forward with preparations for these deployments?

When will we determine that the negotiations are unsuccessful in light of the fact that, in Mr. Perle's words, we have not gone to Geneva with a fall back position?

What criteria are we applying to that determination?

Are the allies committed to what Mr. Perle says is the plan?; what about the Netherlands and Belgium?

Answer. We are going forward with preparations for our deployments.

As indicated by the historical record, one of the principal factors which brought the Soviets to Geneva was the refusal of the NATO Alliance to accept the Soviet Union's hollow gestures aimed at overturning the decision to deploy longer-range INF. Both we and our Allies believe that our continued, demonstrated commitment to the modernization track of NATO's dual decision is important to provide an incentive to the Soviets to negotiate seriously. More importantly, to defer preparations now in the expectation of a successful negotiation would leave us in a position from which we could not recover should the negotiations fail.

We have not set arbitrary deadlines for the conclusion of those enormously complicated negotiations. It may be that only the beginning of deployments will finally convince the Soviets of our resolve to provide adequate defense for the West. Our criterion for success in the negotiations is an agreement which enhances security through verifiable limits on the most threatening land-based missile systems.

Our Allies remain equally committed to NATO's decision to modernize the intermediate-range nuclear forces while seeking meaningful arms control agreements.

READINESS FOR STRATEGIC ARMS CONTROL NEGOTIATIONS

Senator STENNIS. In several of your statements before this Committee last year you indicated that we should not enter strategic arms negotiations "from a position of weakness."

Are you satisfied that we have now developed sufficient strength to engage in meaningful strategic arms control negotiations?

What criteria have you applied in determining whether we are now sufficiently strong?

Answer. In testimony before this Committee last year, we indicated that once it was clear to all that we were embarked on a program which would provide us with such capabilities, we would be in a position to pursue meaningful arms control, provided the international environment was conducive. The necessary programs to redress the strategic imbalance are now underway and we are actively engaged in preparations for the initiation of strategic arms reduction talks (START) when international conditions permit.

MANPOWER COSTS

Senator STENNIS. In recent years, the emphasis on investment programs has brought a slight decline in the percentage of the Defense budget related to manpower. However, Manpower costs still account for almost 50¢ of every \$1 spent on national defense—over \$90 billion during the current fiscal year. Can we really afford the high investment costs needed for modernization when manpower costs remain so high?

Answer. Yes. We need to continue to improve all aspects of our Defense posture through increased spending on military hardware, operations and maintenance, and research and development. However, this modernization effort cannot be accomplished at the expense of the manpower portion of the budget. The sharp restraint on manpower costs during the decade of the 1970's resulted in severe recruiting and retention problems and we do not want to repeat those mistakes. We will take actions where we can to control manpower costs, but we also realize that if we are going to attract and retain the military personnel necessary to meet our manpower requirements, we will have to maintain competitive pay and incur other personnel costs that make service life attractive.

Senator STENNIS. What are the total annual costs of pay and benefits to the government, including future retired pay, for an individual in each of the following grades:

- (a) E-1 with 0 years of service
- (b) E-6 with 12 years of service
- (c) O-2 with 2 years of service
- (d) O-5 with 16 years of service

Answer. The information follows:

Cost element	Grade/year of service			
	E-1/0	E-6/12	O-2/2	O-5/16
Budgeted DOD pays and benefits ¹	\$11,142	\$21,120	\$23,699	\$46,758
Budget DOD support costs ²	1,314	2,731	1,888	2,917
Retirement costs ³	3,058	6,408	7,370	15,443
D & IC costs ⁴	99	293	139	749
Total	15,613	30,552	33,096	65,867

¹ Includes basic pay, BAQ, BAS, VHA, special and incentive pays, and miscellaneous expenses such as overseas station pay, family separation pay, uniform allowances, FICA and life insurance contributions.

² Includes medical, commissary, exchange, educational, mess hall, and recreation, welfare, and morale benefits.

³ Retirement accrual valued at 46.2 percent of basic pay.

⁴ Paid by the Veterans Administration.

SUSTAINABILITY OF BUDGET PROPOSALS

Senator STENNIS. Secretary Weinberger, the fiscal year 1983 Defense budget represents another quantum leap in defense spending, to well over \$250 billion dollars. Government spending elsewhere is being pruned. At the same time our economy is experiencing difficult times. Although inflation has moderated a bit, high interest rates persist and unemployment borders on post-World War II record levels. With this backdrop let me pose several questions—

Question. Can our economy continue to sustain the record levels of defense spending proposed over the next few years? Without regenerating inflation?

Answer. The requested increase in military spending, most economist agree, does not need to generate another round of inflation in the economy. Most industries are operating at less than capacity and any added demand should be properly absorbed without stimulating any noticeable increase in prices.

Question. Will the American public continue to support such levels of defense spending if the economy does not fully revive itself soon?

Answer. We certainly hope the American public will continue to support our defense needs and we believe, at the same time, that the President's program will attain the desired economic goal. The total budget package presented by this Administration is designed to revive the economy within the requested levels of spending for DOD.

Question. Pressure will build this year—and I presume in future years—to trim back on defense spending if projected budget deficits do not narrow significantly. Will these increased levels of defense spending be sustainable politically without deficit reduction?

Answer. The worsening in the federal deficit since last year results mostly from economic change, not from upward shifts in defense spending. In fact defense spending for fiscal year 1982 to fiscal year 1984 is now estimated to be \$10 billion less than estimated last March. Therefore, it is very doubtful that reductions in defense outlays will in any way noticeably alter the federal deficit picture.

TRIAD

Senator STENNIS. Secretary Weinberger, I have long been a supporter of the Triad of land, sea, and air-based strategic forces. Amid growing reports that our land-based strategic forces are becoming increasingly vulnerable—we hear from CIA Director Casey on this subject just yesterday—are we rethinking the logic of this issue? Should we be reexamining this question?

Answer. We continue to believe, as you do Senator Stennis, in the strength of the Triad and its multiplicity of basing modes, weapons mixes and delivery tactics. Its diversity greatly compounds the Soviet attack planning problems and causes them to devote resources to counter a wide variety of potential threats. Most important, the diversity of our Triad provides a hedge against technological developments and unforeseen threats to our Triad components such as the increasing vulnerability of our Minuteman silos to their rapid advancements in ICBM delivery accuracy. In

sum, we have reaffirmed the value of the Triad's diversity and we recognize that it is the very strength of the Triad which now allows us the time to find a suitable and survivable long-term MX basing mode by relying on our still survivable and highly capable submarine and bomber forces. To abandon the Triad now would be to abandon its greatest strength.

STRATEGIC POLICY

Senator STENNIS. Secretary Weinberger there was much fanfare when Program Directive 59 was announced by the previous Administration? Does that document still embody U.S. strategic policy? Or has this Administration been rethinking this issue? If so, how and in what directions are you heading?

Answer. There has been no fundamental change in U.S. strategic policy. Unlike our predecessors, however, we are pursuing a strategic forces modernization program designed to provide the capability necessary to support U.S. policy effectively.

The period in the mid-1980s when major and critical components of our present strategic deterrent forces could be destroyed by an enemy surprise attack is our most vulnerable period. This period of added vulnerability—and hence risk—looms before us because the United States failed to modernize or strengthen its strategic forces while the Soviets have never slowed their strategic buildup. We must regain our momentum now. Most strategic systems take a long time to bring on line—often as much as a decade. That is why parts of our program are specially designed to secure additional strength for the near-term, while at the same time we build the long-term strategic forces we need but cannot deploy until the end of the 1980s. This is an area of such importance that we cannot leave any gaps.

QUESTIONS SUBMITTED BY SENATOR CARL LEVIN, ANSWERS SUPPLIED BY GEN. DAVID C. JONES, CHAIRMAN, JOINT CHIEFS OF STAFF

DEFENSE PROGRAM, FISCAL YEAR 1984-87

Senator LEVIN. General Jones, as approved by the Reagan Administration as part of the fiscal year 1983-87 Defense Program, are the overall dollar totals established for fiscal 1984-1987 period enough to fully fund all the military programs contained in each of the annual defense budgets for this period?

Answer. The individual Service budgets developed under the guidelines set forth by the Secretary of Defense and restated in his 8 February 1982 press release are intended to reflect a realistic approach to estimating costs. The numbers are subject to unanticipated changes in inflation indices and overall economic conditions as well as to unforeseen technological problems which may result in cost growth. Given current information it is fair to say that the budgets for this period are representative of anticipated costs.

Senator LEVIN. (a) General Jones, today would you agree with your statement one-and-a-half years ago that you would not swap our Armed Forces for those of the Soviet Union?

(b) Would you agree with each of the Service chiefs on the basis of a Service-for-Service swap—our Army for the Soviet Army, our Navy for the Soviet Navy, our Air Force for the Soviet Air Force, and our Marine Corps for the Soviet Naval Infantry, its closest equivalent?

Answer. (a) I regret that what I said in 1980 has been misinterpreted as meaning that our total military capability is greater than that of the Soviet Union. What I had in mind was that in certain areas—such as the quality, flexibility, and innovativeness of our people, our technological prowess, and our national spirit and commitment—we hold advantages that no commander would trade away. But it is important not to overlook the fact that there are elements of the Soviet force that are superior to our forces. The importance of imbalances, however, must be viewed in the context that the United States and Soviet Union have significantly different force requirements based on differing missions.

(b) Also, I agree with the Service Chiefs that we would not want to swap our respective Services for Soviet equivalents but this does not mean we have a greater capability in each area.

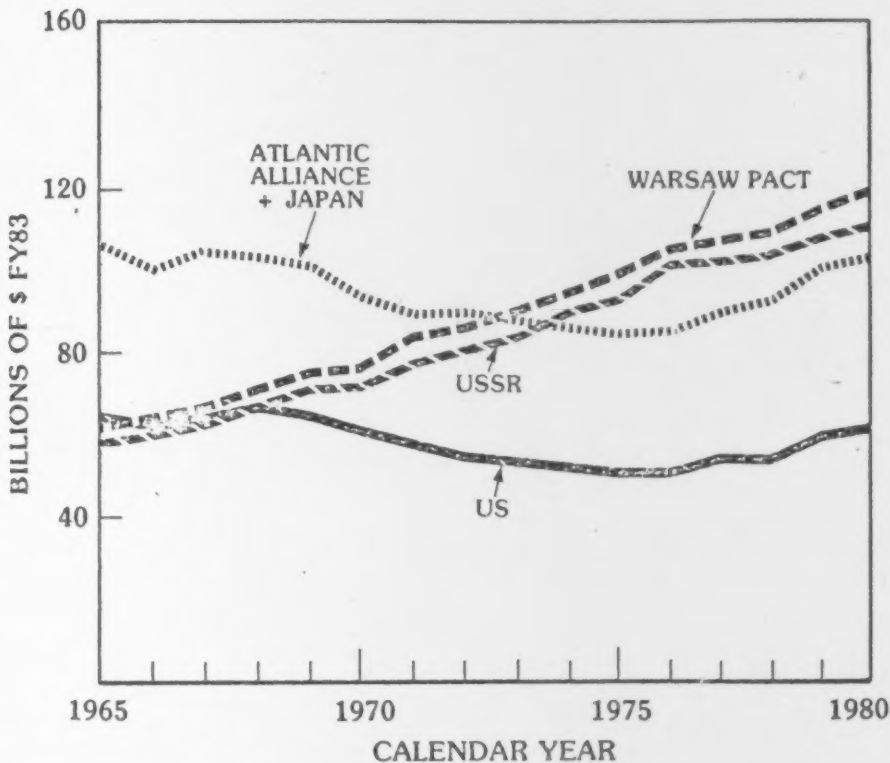
COMPARISON OF UNITED STATES ALLIES VERSUS SOVIET EXPENDITURES ON DEFENSE

Senator LEVIN. General Jones, last year you agreed with me that it was true that, even before the large increases approved for the fiscal 1981 and fiscal 1982 Defense

budgets the U.S. and its allies were spending more on defense than the Soviets and their allies and had been doing so and would continue to do well into the future. Our present projections continue to show this to be the case, do they not? Please provide for the record an updated chart showing the comparison in Defense spending between the United States/NATO and the U.S.S.R./Warsaw Pact.

Answer. Yes, total spending for the U.S. and our allies is projected to remain above that of the Soviets and their allies. It should be noted however that adding the programs of our allies to U.S. programs is misleading. Any apparent edge of the western alliance is overshadowed by the more meaningful comparison of military investment. The military investment programs of the Warsaw Pact have exceeded those of the Atlantic Alliance plus Japan since 1973; they are currently about 15-20 percent larger (See chart).

**COMPARISON OF ESTIMATED ATLANTIC
ALLIANCE + JAPAN MILITARY
INVESTMENT OUTLAYS WITH ESTIMATED
DOLLAR COSTS OF WARSAW PACT
MILITARY INVESTMENT ACTIVITIES**



NOTES:

INVESTMENT INCLUDES RDT&E, PROCUREMENT AND MILITARY CONSTRUCTION.

U.S. TOTAL EXCLUDES VIETNAM INVESTMENT.

NON-U.S. ATLANTIC ALLIANCE DATA DERIVED FROM NONPERSONNEL DEFENSE OUTLAYS CONVERTED TO DOLLARS USING CONSTANT EXCHANGE RATES.

JAPANESE DEFENSE BUDGET

Senator LEVIN. General, as you know, some of our allies are doing better than others as far as contributing their fair share to the common defense.

Last year, I asked you whether you agreed with the assessment that the Japanese increase of 7.61 percent in their 1981 defense budget above their 1980 defense budget was both disappointing and inadequate. I also asked whether you agreed with former Defense Secretary Harold Brown's reaction that the increase in the 1981 Japanese defense budget over the 1980 figure seemed to demonstrate a sense of "complacency" about the security risks in today's world facing both Japan and its American ally.

You agreed with both assessments.

This year, considering the implications of the events in Poland, would you agree that the recent Japanese decision to increase their 1982 defense budget by only 7.75 percent above 1981—an increase of a mere 0.14 percent above last year's increase—again is disappointing and inadequate and again demonstrates "complacency" about the security risks in today's world to Japan and the U.S.?

Since the Japanese government earlier this year agreed to assume a new responsibility to defend its air and sea lanes out to 1,000 miles from Japan—which will add new requirements to the present plan, adopted in 1976—doesn't this latest inadequate increase mean Japan will be unable to meet its commitments to its U.S. ally?

Answer. The Japanese increase of 7.8 percent for their fiscal year 1982 defense budget came at a time when other government expenditures were held to an average increase of two percent or less. (In 1981 the percent increases in defense and other governmental expenditures were considerably closer.) The 1982 figure demonstrates a greater awareness of the risk and an appropriate change of priorities. Japan will need to do much more in the future, but the 1982 efforts represent a beginning, albeit slow, for joint burden-sharing affirmed under the roles and missions approach in the Reagan-Suzuki joint communique of May 1981. I would have preferred that the Japanese had done more.

JAPANESE DEFENSE EFFORTS

Senator LEVIN. Is it not true that most knowledgeable defense experts have predicted that Japan would need to increase its defense spending annually by at least 15 percent to accomplish its present 5-year defense program by 1983, when we have asked them to complete it?

Doesn't this latest disappointing increase mean that completion of this program could be even further delayed?

Answer. There is no agreed upon figure of how much it would take Japan to achieve its present defense program by 1983. We are not encouraging the Japanese to meet any arbitrary statistical goals but rather to do what is necessary to carry out its roles in a U.S.-Japan division of labor in the defense area. Japanese press reports do indicate that, owing to future procurement items already included in this year's and previous budgets, an increase in excess of ten percent is likely for 1983.

BEST LONG-TERM BASING OPTION

Senator LEVIN. General Jones, let me ask you some questions about the MX basing mode decisions confronting us. The Administration has proposed choosing among the continuous patrol aircraft, ballistic missile defense and deep underground basing for a permanent home for the MX missile. Two of these have been rejected before because of a host of military-effectiveness and cost effectiveness problems—deep underground basing and air mobile. I understand that the continuous patrol aircraft concept is different from the previously rejected air mobile concept, but all that does is raise a new host of technical problems. The third basing mode—ballistic missile defense—still is an unproven technology in many crucial respects. Even though significant progress has been made in developing the low altitude system (LoADS), it promises to be ineffective by itself in protecting silos since it depended heavily on the deception of a multiple protective shelter basing mode. The layered defense, which uses LoADS with another high-altitude system to intercept incoming warheads in space, is an extremely high risk system from both scientific and technical viewpoints, primarily because the space-intercept component is at the very "frontier" of technology which has yet to be proved. Which of these three basing modes do you think has the best potential for proving itself technologically, financially and militarily, and thus solving our MX basing problem?

Answer. At this time, I believe a combination of deceptive basing and ballistic missile defense has the greatest likelihood of meeting the requirements; however, work on other basing modes should continue so that all options can be addressed prior to the final decision on July 1, 1983.

ABM

Senator LEVIN. Lost in the debate about whether to pursue a ballistic missile defense system seems to be the realization that, should we decide to pursue such a system which requires abrogation or significant modification of the ABM Treaty, we have caused ourselves another significant problem as we try to solve the ICBM basing mode dilemma.

If the treaty is abrogated or modified, this would permit the Soviets to deploy a ballistic missile defense system, also would it not?

Since they have been conducting a more vigorous BMD research program than we have in the past, even though we are technologically ahead of them, this means they might be able to deploy an extensive system more quickly than we might, does it not?

Such a system could significantly reduce the penetration and effectiveness of our own missile warheads attacking the USSR, could it not?

Even if it were not completely effective in protecting the USSR from American warheads, our confidence in the military effectiveness of our warheads would be reduced by the deployment of an extensive Soviet BMD system, would it not?

In order to compensate for either a reduction in the military effectiveness of our warheads, or our confidence in them, we would have to greatly expand our strategic arsenal as a "hedge" against the Soviet BMD system, would we not?

If we did not expand the arsenal, we probably would have to greatly increase our R&D on advanced penetration measures for our warheads, such as decoys or maneuvering warheads, would we not?

Answer. The Administration is currently addressing the full range of implications of pursuing a ballistic missile defense system as one option for a long-term, survivable basing mode for the MX. The questions you have raised are ones that will receive the most serious consideration.

QUESTIONS SUBMITTED BY SENATOR CARL LEVIN, ANSWERS SUPPLIED BY HON. CASPAR WEINBERGER, SECRETARY OF DEFENSE

OPERATIONAL PROCEDURES TO OVERSEE THE B-1B PROGRAM

Senator LEVIN. Please detail for us the exact operational procedures in place to oversee the B-1B program in order to insure compliance with the Reagan cost figures. Who is keeping tabs on the total expenditure for the B-1B program? Is that same entity insuring that the rate of expenditure complies with the total program estimates of \$20.5 billion in 1981 dollars?

Answer. The President, in his January 18, 1982 letter to the Congress, certified that he was confident that a 1986 Initial Operational Capability (IOC) was achievable and that the acquisition of 100 B-1B aircraft was feasible within the \$20.5 billion (in constant 1981 dollars) budget estimate. With this unique obligation, several management review systems have been initiated to tightly monitor the program with respect to performance, schedule, and cost growth.

Strict control procedures for the B-1B acquisition program, including the aircraft configuration, have been implemented. The change control procedures include an initial review of any change proposal by the B-1B Steering Group. This is a select group of general officers representing the Air Staff and the Major Air Commands.

With their concurrence, recommendations are forwarded to the Air Force Council. The Air Force Council is the Air Staff senior review group and is chaired by the Vice Chief of Staff of the Air Force. Their recommendations are forwarded to the Chief of Staff of the Air Force.

The Secretary of the Air Force provides final Air Force review. Proposals are then submitted to the Deputy Secretary of Defense for his final review and approval.

Several periodic reviews/reports are part of the management plan including:

(1) Bi-weekly progress reports on contract negotiations to the Office of the Secretary of Defense.

(2) Secretary of the Air Force bi-weekly reports to the Secretary of Defense on general programmatic issues.

(3) Quarterly reports on program costs to the Deputy Secretary of Defense.

(4) Quarterly Air Force Secretarial Program Reviews and monthly letters from the Program Director to the Secretary of the Air Force.

(5) Selected Acquisition Reporting for the B-1B program.

In addition, there are a myriad of internal Air Force mechanisms to control the costs of this major weapon system such as frequent, in depth program reviews, associate contractor cost reporting, close tracking of subcontractor status, and on-site surveillance. The implementation of these rigorous management procedures make us fully confident that the B-1B will be a bench mark for future weapon system acquisition.

PHASEOUT OF B-52D'S

Senator LEVIN. Despite strong Congressional direction to keep the B-52Ds operating until the B-1 IOC-1986-DOD as of two weeks ago still was planning to phase out three B-52D squadrons well before that date and two in fiscal year 1985 or fiscal year 1986. This still is the case and why is DOD ignoring the will of Congress as stated in the fiscal year 1982 DOD Appropriations Conference Report:

B-52D'S

The conferees agree that the B-52Ds should be continued in operation until such time as the B-1 or other new strategic bomber becomes available. At that time existing B-52G and H model aircraft currently devoted to SIOP missions can be freed and programmed for the conventional warfare role. The B-52Ds are to be retained and supported as planned in the original President's budget submission.

Answer. The present schedule calls for Air Force to receive its first operational B-1 in fiscal year 1984/85, with IOC in October 86. Maintaining two B-52D squadrons until that timeframe is an affordable response to congressional direction which minimizes strategic rebasing perturbations and provides a readily available manpower pool for the B-1. Additionally, Air Force plans an external modification to 67 B-52Gs in fiscal year 1983/84. This will provide flexibility for conventional power projection until the B-52Gs transition formally into the conventional role as the last two B-52D squadrons retire.

ACCELERATION OF STRATEGIC PROGRAMS

Senator LEVIN. Which strategic weapons systems programs can be accelerated as far as delivery times—by how long and for how much money in each case? (Your statement on page 10 discusses acceleration.) How would you accomplish this?

Answer. We are investigating the possibility of accelerating the Trident II (D-5) SLBM. Similarly we will continue to strive to reach a decision on long-term, survivable MX basing mode as quickly as possible. A decision to accelerate a major weapons system involves consideration of such complex variables as feasibility, technical risk, and cost. As a result, it is difficult to predict when such decisions will be reached and what the associated degree of acceleration, cost, and means of accomplishment would be. We will expeditiously notify the Congress in the event a decision to accelerate a given program is reached.

STRATEGIC POLICY

Senator LEVIN. PD 59, developed under the Carter Administration, was to provide strategic nuclear deterrence guidance to our military force planners. What is the current strategy being used by the Reagan Administration to develop strategic plans? Has it adopted the "countervailing strategy" of the last administration?

Answer. There has been no fundamental change in U.S. strategic policy. Unlike our predecessors, however, we are pursuing a strategic forces modernization program designed to provide the capability necessary to support U.S. policy effectively.

The period in the mid-1980s when major and critical components of our present strategic deterrent forces could be destroyed by an enemy surprise attack is our most vulnerable period. This period of added vulnerability—and hence risk—looms before us because the United States failed to modernize or strengthen its strategic forces while the Soviets have never slowed their strategic buildup. We must regain our momentum now. Most strategic systems take a long time to bring on line—often as much as a decade. That is why parts of our program are specially designed to secure additional strength for the near-term, while at the same time we build the long-term strategic forces we need but cannot deploy until the end of the 1980s. This is an area of such importance that we cannot leave any gaps.

Senator LEVIN. Mr. Secretary, during the presentation of the Administration's fiscal year 1982 budget amendments last year you mentioned improvements in the

readiness of our current forces as one of your highest priorities. What specific achievements can you point to in this area after your first year in office?

Answer. The fiscal year 1983 budget shows a real increase over the readiness-related funding in fiscal year 1982, a budget that had already been increased in the readiness area by the fiscal year 1982 Reagan amendment. These increases demonstrate the resolve of this administration to keep readiness a number one priority. A detailed statement of the improvements resulting from this funding is provided in the Force Readiness Report which will be submitted to the Congress on February 15. The fiscal year 1983 budget virtually eliminates the component repair depot maintenance backlogs in all Services, increases substantially the funding of aircraft spares stocks, and maintains the non-operational overhaul backlog for ships at zero. These fiscal year 1983 initiatives will result in significant improvements in materiel readiness not only in fiscal year 1983 but also in fiscal year 1984-85 when the fiscal year 1983 funded spares are delivered to the field.

Senator LEVIN. Please summarize the major readiness and sustainability initiatives included in the fiscal year 1983 Defense budget request, in addition to those in your opening statement.

Answer. Major initiatives included: elimination of all depot maintenance backlogs in fiscal year 1983; full funding of all requirements for spares procurement necessary to implement the Services planned operating tempo for training proficiency; and procurement of enough war reserve materiel by the end of the fiscal year 1987 funded delivery period to provide munitions and secondary items support for [deleted] and equipment attrition replacements for [deleted].

Senator LEVIN. How do you measure readiness and sustainability to determine if the budget request for these areas is adequate?

Answer. Readiness funding can be related to mission (MC) rates for major items of equipment and compared to our goals. Sustainability funding (for ammunitions, secondary items, war reserve equipment, etc.) equates to a number of days of supply which can be compared to the minimum essential levels mandated in the Defense Guidance.

Senator LEVIN. How many ships and carrier battle groups are currently deployed in the Indian Ocean? Are any changes to the level of forces currently deployed in the Indian Ocean planned for fiscal year 1983?

Answer. The Navy maintains an average of 16 combatant ships and 5 auxiliaries in the Indian Ocean. They are supplemented by an amphibious group of 4 ships a majority of the time. Also, the 13 near-term prepositioned ships are based at Diego Garcia. In addition, we maintain a minimum of one carrier battle group (CVBG) in the Indian Ocean, and from time to time, there has been a second CVBG in the area.

Senator LEVIN. What changes are planned in the level of troops deployed overseas during fiscal year 1983?

Answer. There are no significant changes planned for 1983.

FUTURE OF THE GUARD AND RESERVE

Senator LEVIN. Mr. Secretary, what is the Administration's policy regarding the Guard and Reserve forces? What specific programs are being developed, have been developed, during your tenure to build-up the strength of the Reserve Components? What plans do you have for the future of the Reserve Components? When can we expect some substantial changes in the Guard and Reserve contribution to the national defense posture?

Answer. Administration policy is Total Force Policy and, accordingly, recognizes that we cannot engage in serious combat without the Reserve Components. The co-equal and interdependent bases of the Reserve and Active Components in the Total Force dictate a degree of personnel, equipment and training readiness that is irrelative of component.

Equipment problems face the Total Force but to the Reserve Components they pose the most serious inhibitor to readiness. We are looking at alleviating these deficiencies through a combination of "new" and "old" measures. Unitary buys, multi-year procurement contracts and increased competitive bidding constitute "new" approaches for increasing procurement by increasing the value of the procurement dollar. Increasing the dollars spent on Reserve equipment constitutes expansion of an "old" measure and is exemplified by the increases we introduced in the fiscal year 1981 Budget Supplemental and Fiscal Year 1982 Budget Amendment. Additionally, we intend to endorse strict adherence to an "old" policy that readies first those units, Active or Reserve, needed first, and we also plan increased Reserve participation in the procurement process.

With the exception of the Army components and Naval Reserve, the Selected Reserve of the other components are at or nearly at their wartime requirements. We have in this past year reinforced viable incentive programs, increased the full-time manning force and strengthened our Employer Support programs. In fiscal year 1981, the Army Guard and Reserve strength increased by almost 41,000. In fiscal year 1982, we are budgeted to increase those components by another 35,000 and are encouraging an even greater strength rise. Through application of the programs in force and improving our understanding of unwanted attrition, we expect to substantially reduce our mobilization shortfall annually, and by fiscal year 1986 to be manned to meet our requirements.

Additionally, pretrained manpower in the form of Individual Ready Reservists is required. To solve this shortfall, the Department is initiating both short- and long-term proposals. In the near-term: reinstatement and enhancement of the IRR reenlistment bonus; direct enlistment with a modest bonus; and inclusion of IRR members in the eligibility pool for Servicemen's Group Life Insurance (SGLI). The long-term proposal would involve increasing the term of the military service obligation. The integration of the short- and long-term programs would resolve the mobilization manpower shortages by the late 1980's.

I see no need at the present time for substantial changes to the Reserve Components contributions to national defense. The existing contributions to the Total Force, including the Rapid Deployment Force and early deploying missions, are all that we currently should expect of the Reserve Components. Our primary objective now is to improve their capability for making these contributions and the signs of success are already becoming evident especially with regard to increasing strength. Improvements in the equipment posture will follow.

Senator HUMPHREY. The hearing is adjourned.

[Whereupon, at 12:55 p.m., the committee adjourned subject to the call of the Chair.]

REPORT OF SECRETARY OF DEFENSE

CASPAR W. WEINBERGER

TO THE CONGRESS

ON THE

FY 1983 BUDGET, FY 1984 AUTHORIZATION REQUEST
AND FY 1983-1987 DEFENSE PROGRAMS

FEBRUARY 8, 1982

THIS REPORT REFLECTS THE FY 1983 DEFENSE BUDGET
AS OF JANUARY 31, 1982

REQUIREMENTS
FOR
NATIONAL
SECURITY

We know only too well that war comes not when the forces of freedom are strong, but when they are weak. It is then that tyrants are tempted.

-- Ronald Reagan
(July 16, 1980)

The strength of the United States serves to protect the American people and helps preserve the peace. We need strength to deter attack, to support the cause of freedom, and to work for a peaceful world. But our nation can be strong only if our defense and foreign policies enjoy broad support at home. For it is in the American people that the ultimate strength of the United States resides--in the patriotism and convictions, in the skills and courage of each of us.

Fifteen months ago the American people gave Ronald Reagan the mandate to lead our nation. That mandate emphasized the strengthening of America. It is the President's responsibility, while working ceaselessly for peace, to ensure that the safety of the American people cannot successfully be threatened by anyone. President Reagan has kept his pledge to make this responsibility his first priority.

I am pleased to submit to the Congress and the American people the first Defense Budget for which the Reagan Administration is fully responsible. This report for Fiscal Year 1983 contains my summary of our defense policy, programs, and budget.

First, I must express my deep appreciation to the Congress for the support given to the Department of Defense during the past year. Much has been accomplished in the vital area of our nation's security. Far more remains to be done. To complete the task we have begun, to redress the military balance with the Soviet Union, many years of sustained effort will be needed. I pledge to work with Congress to make sure the burdens the American people assume will bring the fullest measure of security for our country.

A. RESOURCES

It is my primary statutory responsibility to advise the President, the Congress, and the American people of the things we must do to improve our national defense and why we must do them. Serious deficiencies in our military forces have compelled us to break with past thinking and to develop new policies and programs. We must correct the major weaknesses in our defenses that have resulted from a decade of neglect. And we must at the same time look at the decade to come. With the cooperation of this Congress, we will construct a defense that can substantially reduce the dangers we now face, and, at the same time, give us the margin of safety necessary to preserve the peace.

We are requesting \$258.0 billion of Total Obligational Authority (TOA) for the Defense Department for this coming fiscal year. Taking FY 1982 TOA as a base, we envision an average real growth rate in the defense budget of 7.4 percent a year over the next four years (Table I.A.1).

TABLE I.A.1

Five-Year Defense Plan

	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>
<u>TOA</u>						
Current Dollars	214.2	258.0	285.5	331.7	367.6	400.8
FY 1983 Dollars	227.8	258.0	269.8	297.8	314.0	325.9
<u>Outlays</u>						
Current Dollars	182.8	215.9	247.0	285.5	324.0	356.0
FY 1983 Dollars	195.4	215.9	233.2	255.6	276.0	288.7
Defense Budget as a Percent of GNP	5.9	6.3	6.5	6.9	7.2	7.4

For the major individual programs a detailed discussion of the reasons which make these increases necessary is, of course, required. But it is equally important to state the broad and fundamental reasons for the increase in the defense budget as a whole, so that Congress can properly weigh the needs of the defense of the nation against the many other demands on the Federal Budget.

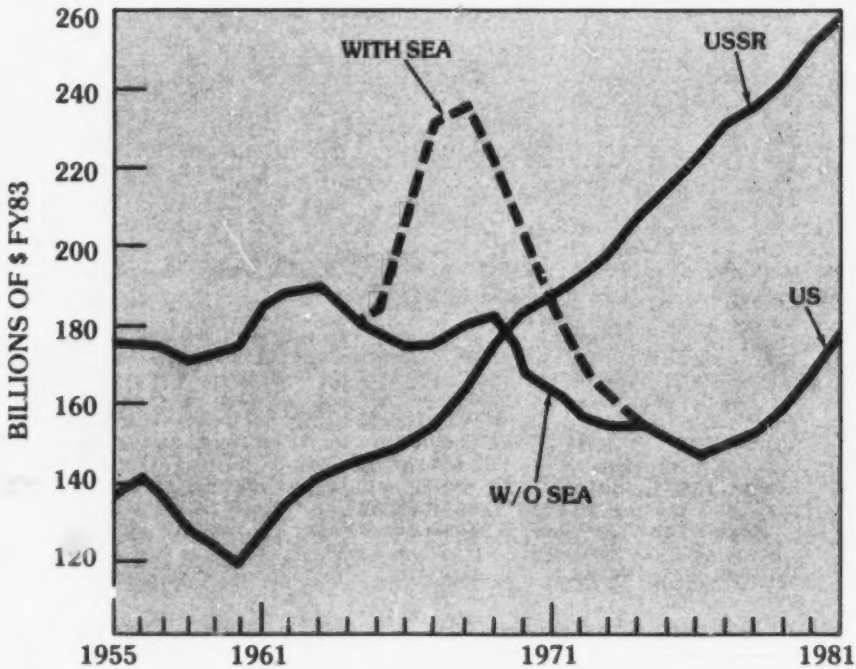
Why must the defense budget be increased as much as we propose?

First, because we must now pay the bill for our collective failure to preserve an adequate balance of military strength during the past decade or two. While our principal adversaries engaged in the greatest buildup of military power seen in modern times, our own investment in forces and weapons continued to decline until very recently. Even now we have yet to match their level of effort, as Chart I.A.1 clearly demonstrates.

Second, because we cannot, in good conscience, increase our reliance on the threat of nuclear weapons to evade the need for restoring our conventional military strength across the board. And we also cannot neglect our strategic deterrent that must prevent the use of these terrible instruments by the enemy. In fact, we must overcome the obsolescence of our strategic nuclear arms and strengthen each part of the Triad.

Chart I.A.1

COMPARISON OF US DEFENSE OUTLAYS WITH ESTIMATED DOLLAR COST OF SOVIET DEFENSE ACTIVITIES



NOTES:

U.S. DEFENSE OUTLAYS INCLUDE NATIONAL SECURITY PROGRAMS FUNDED BY DOD AND DEFENSE RELATED OUTLAYS OF DEPARTMENT OF ENERGY, COAST GUARD, AND SELECTIVE SERVICE AND THEIR SOVIET COUNTERPARTS.

EXCLUDES RETIREMENT, FOREIGN MILITARY SALES AND CIVIL DEFENSE.

Finally, because we cannot offer the American people and our allies a mere facade of security by deploying forces that lack the necessary materiel and training and are not backed up by an adequate mobilization potential.

It is important to note that, for the last three decades, real U.S. defense expenditures remained virtually constant. With the exception of increases in expenditures for the Korean and Vietnam wars, defense outlays fluctuated within a fairly narrow range--between about \$150 billion and about \$190 billion (in constant FY 1983 dollars). As the economy grew, therefore, the relative investment in defense expenditures diminished.

The constant level of total defense expenditures masks, however, a quite different pattern for our defense equipment and the infrastructure that supports it--the "capital stock" of the nation's defense establishment. The United States emerged from World War II with a very significant "capital stock" for defense. It had, for example, built a fleet of ships so large that it could maintain a Navy of approximately 1,000 vessels in active service until the late 1960s. It had constructed a whole series of defense plants and some of the facilities that were built in World War II are still in use today.

But the typical defense capital asset lasts between 15 and 25 years. Thus, in the 1960s, we should have faced a major requirement for reinvesting in defense if we were to maintain the margin of safety we had enjoyed since the end of World War II. Such a reinvestment program for conventional forces was indeed begun under President Kennedy, but it was interrupted by the Vietnam War. During the 1970s, instead of continuing to reinvest in our defense effort, we decided to retrench substantially. New investment was pursued during the 1970s in selected areas only--for instance, Air Force tactical aircraft. Hence, in most areas we now face a major backlog of investment requirements.

Not only did the relative defense effort of the United States decline but, and with few exceptions, our allies spending rose only gradually. An increase in defense spending throughout our alliances is clearly necessary.

Given the undoubted importance of reducing the rate of growth of the Federal budget and the difficulties caused by reductions in domestic programs, it is important that we be aware of the relative size of our defense expenditures. Our total defense expenditures will still amount to no more than 7.4 percent of GNP in FY 1981, as compared to an average of more than eight percent of GNP during the 1950s and 1960s (Chart I.A.2). And as a percentage of public spending (Federal, state, and local), defense will be relatively low compared with an average of about 30 percent during the 1950s and 1960s (Chart I.A.3). The much published figure of \$1.6 trillion for defense within the next five years is still less than the \$1.8 trillion now contemplated for social and welfare programs for the same period.

CHART I.A.2
**U.S. DEFENSE BUDGET AS A PERCENT OF
GROSS NATIONAL PRODUCT, 1940-1981**

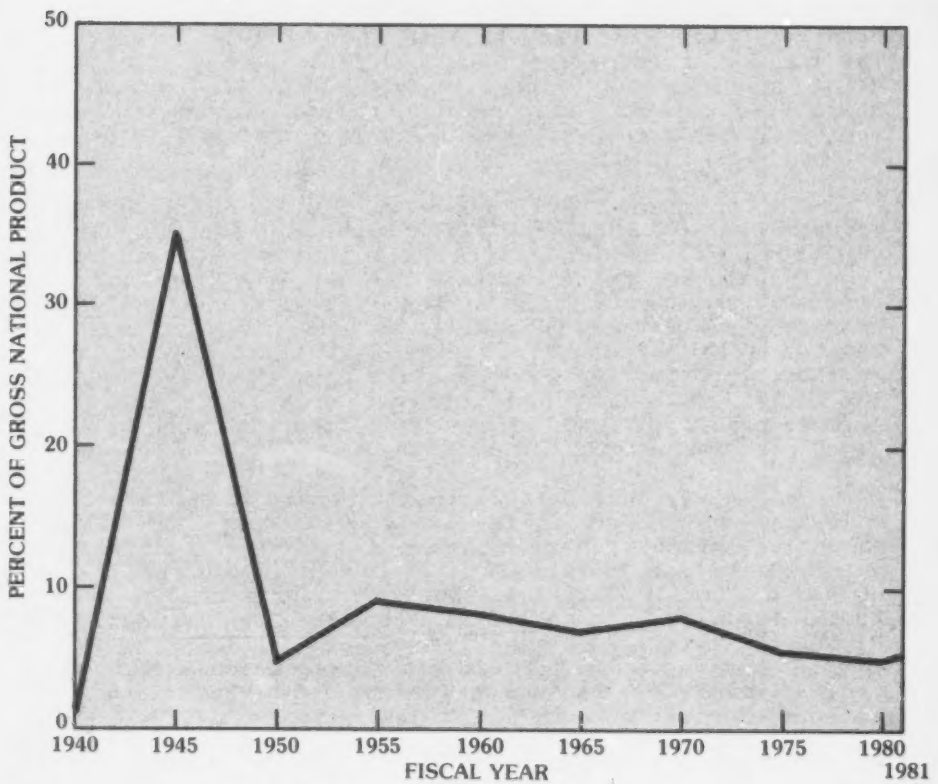
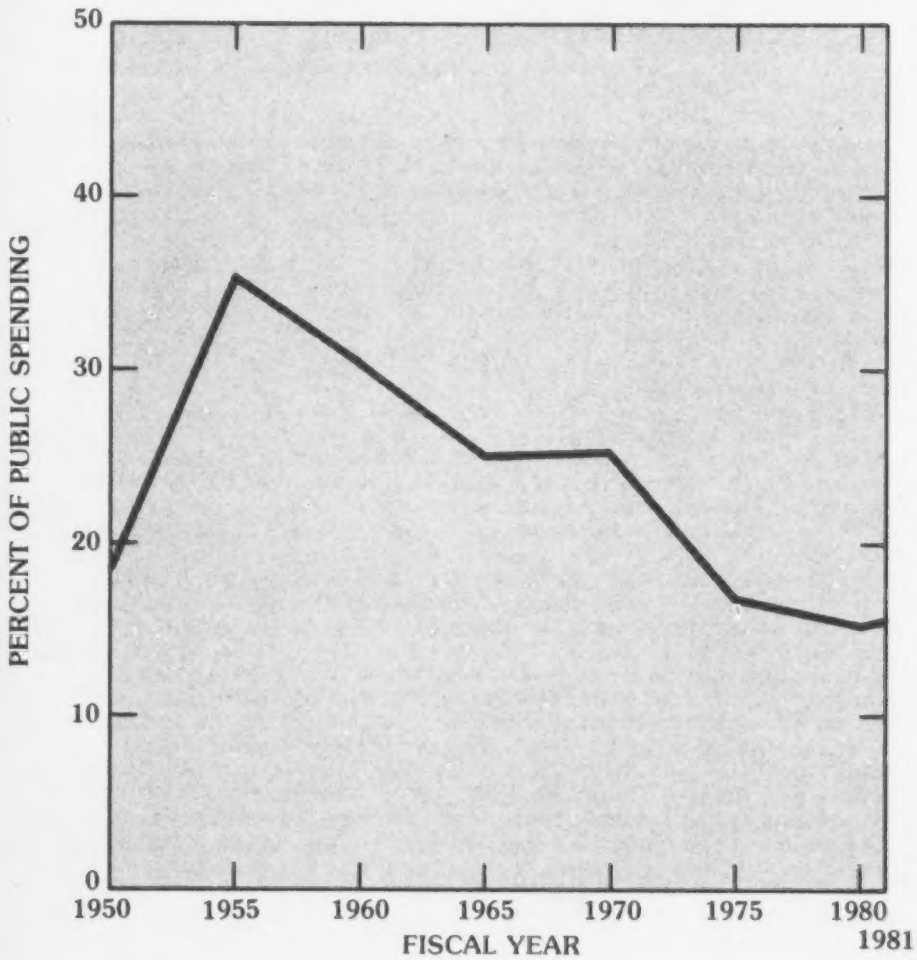


CHART I.A.3

**U.S. DEFENSE BUDGET AS A PERCENT OF
PUBLIC SPENDING, 1950-1981**

Fears that the defense budget of this Administration will strain the American economy are unfounded. In the 1950s and 1960s, when defense spending as a percentage of GNP was much larger than today, annual inflation rates ranged from about one to seven percent. Economic studies have found little difference in the effect of defense and non-defense spending on inflation. Defense spending, like other Federal spending, produces something which contributes to the people's welfare. The very purpose of our economy is to meet the needs of our people. Defense is an urgent need, and we have ample resources to meet it. As British Air Marshall Sir John Slessor put it: "It is customary in democratic countries to deplore expenditure on armaments as conflicting with the requirements of social service. There is a tendency to forget that the most important social service that a government can do for its people is to keep them alive and free."

Yet, while it is essential to allocate greater resources to our defense needs, by itself, even that would not be enough. We must not only spend more money for our security, we must also bring our thinking up to date.

B. POLICY AND STRATEGY

Policy endows our defense effort with purpose. It relates means to ends, but considers neither as unchangeable. Our defense policy must tell us how to reshape the means we inherited so that we can better attain our objectives, and it must help us to define our ends realistically.

To change the forces we inherited takes time; we can alter them only incrementally. Much of our defense budget today must go to support our existing assets: to compensate and provide for the people who make up the Armed Forces and to increase the readiness of existing units and strengthen their ability to sustain themselves in combat. Since we must maintain substantial forces to deter present threats, only about one-third of the defense budget I have submitted to you is left to purchase more, or new arms and other equipment. And it will take several years for these purchases to have an impact on force capabilities. Thus, the means available during the next few years have largely been shaped by past policies and strategies and by past expectations about our adversaries and the threats we will face. We are, to a greater extent than we would like, the prisoners of our immediate past.

1. The Need for Change

Sadly, many of our past expectations have been disappointed. The most fateful disappointment, perhaps, concerns the role that military power continues to play in the world. Expectations were widespread in the West that arms agreements and other understandings--explicit or tacit--would have a universal rather than a unilateral effect on limiting the accumulation of weaponry and restraining the level of military spending, East and West. With the exception of the U.S. build-up related to Vietnam, the United States and its allies gradually reduced the proportion of national income (i.e., GDP and GNP) devoted to

defense during the mid and late 1950s and 1960s. However, the Soviets continued to amass force without slackening; and, they have already exploited their growing power in several areas of the world.

The Soviets have used proxy military force in Angola and Ethiopia and they have used their own military forces for the invasion and continuing occupation of Afghanistan. We have learned once again that even when our adversaries do not actually fire weapons, they can exploit a preponderance of military power. They can coerce by threatening--implicitly or explicitly--to apply military force--as in Poland. In this way, they can continue to hold captive populations that clearly want to be free. And given the opportunity--for example, in Iran--they might seek to expand their imperial reach.

A second and related Western expectation that was disappointed had to do with the West's long-term reliance on a continuing American advantage in nuclear weapons to offset the Soviets' advantage in conventional arms in the center of Europe. When the Soviets failed in their attempt to change the nuclear balance by placing missiles in Cuba, many in the United States expected that they would not make the effort to challenge our strategic advantage. But they did make the effort. By the late 1970s, we had cut our strategic spending (in constant dollars) to one-third of what it had been during many years prior to the early 1960s, while the Soviets tripled their strategic spending since the early 1960s.

Just as the level of resources that we devote to defense has become inadequate, so has our intellectual approach been overtaken by events. Indeed, our defense policy has not only become obsolete because of new threats to our security, it has also been discredited by its failure to recognize and cope with the deterioration in the global military situation. In fact, obsolete strategic concepts have stood in the way of necessary reforms. Hence, we have to break with some past thinking and develop new policy and concepts.

The first change needed in our thinking, then, is a clear recognition that we face adversaries with serious long-term goals incompatible with our own and that we must, therefore, undertake a sustained effort to increase the ability of the United States and our allies to protect our common interests and to deter the use of force.

Even though it is essential that we reform our defense policy, one must not regard this reform as a substitute for an increased defense effort. The adoption of new ideas and thinking is sometimes presented as an alternative to sustained growth in the defense budget. It is not. Part of the needed reform in strategic thinking is precisely the new realization that we must devote more resources to defense.

In stressing the importance of change, however, I do not wish to belittle the substantial continuities in our strategic objectives and approach. The United States

remains committed to a defensive use of military strength; our objective is to deter aggression or to respond to it should deterrence fail, not to initiate warfare or "pre-emptive" attacks. In tactics it is often said, the offensive is the best; but the defense policy of the United States must remain strictly defensive. This stance has been fundamental to U.S. national strategy since World War II, indeed even before then. From this premise it flows that our military forces must be prepared to react after the enemy has seized the first initiative and react so strongly that our counter attacks will inflict unacceptably high cost on the enemy--a requirement that puts a heavy burden on our readiness and intelligence capability. A defensive strategy must be responsive to the particular threats presented by our potential enemies; in other words, we must adapt our forces and our tactics to the magnitude and character of the threats as they evolve over time.

Another fundamental continuity in our defense strategy is the importance of U.S. commitments to allies and the tradition of military cooperation within an alliance framework, especially within NATO. The necessary recasting of our strategy must, as far as possible, evolve in close cooperation with our allies. The contributions of each ally to the common defense will, of course, be changing over time. It is clear that to achieve greater equity among the burdens imposed on the economies and taxpayers of each nation and greater safety for us all, several of our allies will have to assume a larger share.

2. Warning and Mobilization in a Defensive Policy

Given the long established and broad agreement that the United States and its allies are committed to a defensive use of military strength, one would expect that the most essential requirement of such a policy--preparedness to respond to warning and to mobilize--would always have been accorded top priority. Yet I found that much more should have been done and now, must be done.

Four tasks, I decided, had to be undertaken with a high sense of urgency. First, we needed to make more realistic the manner in which our forces respond to warning. Second, we had to increase substantially programs to improve the steady-state of readiness of our forces. Third, we had to enhance our preparations for military mobilization--that is, the arrangements and prior training needed quickly to mobilize, assemble, and deploy our forces. Fourth, we had to repair the national capacity to expand defense production rapidly during a crisis.

Our forces and those of our allies will, of course, be better able to cope with an armed attack if we alert them in response to warning and bring them to a higher state of readiness before the enemy strikes. Indeed, major aspects of our deployments and military planning are based precisely on the assumption that we can exploit warning of an enemy attack. A clear example is the NATO plan to reinforce U.S. strength in Europe, in response to

warning of an enemy attack. A clear example is the NATO plan to reinforce U.S. strength in Europe, in response to warning of an impending Warsaw Pact attack, by airlifting troops and having their heavy equipment prepositioned in Europe.

To carry out a timely response to warning, however, two conditions must be met: we must not only receive warning, but also take the decision to respond. The first task has long been recognized; it calls for strong intelligence capabilities. It is the second task that has been neglected or misunderstood. We cannot assume that the enemy, if he actually plans to attack, will necessarily do us the favor of furnishing warning that is unambiguous. Military history reminds us that we ought to expect a massive and skillful effort at deception.

It is sobering to recall how often elaborate warning systems failed to trigger the needed decisions to prepare against surprise attack. The Soviet Union failed to anticipate the German attack in 1941; the Soviets, in turn, surprised the Japanese in 1945. Despite the lesson of Pearl Harbor, we were caught unprepared again in June 1950 by the North Koreans. The Israelis achieved surprise in 1967, only to fall victim to surprise in 1973. It seems likely that skillful deception could deprive us of clear warning. Indeed, Soviet military doctrine puts great emphasis on deception and surprise.

Hence, we have to change our policy for reacting to warning. Our forces and those of our allies must be prepared to respond to warning indicators that are highly ambiguous. These responses must be such that they can be decided upon quickly, sustained--if necessary, for a prolonged period--until the ambiguity is resolved, and repeated every time the warning indicators demand it. Our response to ambiguous warning ought to reduce vulnerabilities and the maldeployment of forces and improve our forward defense. A policy that provides for such responses, as a routine procedure, can help to avert crises and strengthen deterrence. By contrast, being prepared to respond only to warning that is unambiguous means being prepared for the kind of warning we are least likely to get.

By improving our ability to respond to ambiguous warning, we would substantially improve the deterrent value of our forces and their ability to cope with an attack. This is a measure we can take quickly and--an added attraction--at a very small budgetary cost. Hence, we have launched several projects to improve responsiveness to ambiguous warning. Last spring, for example, I requested our NATO Allies to join us in a study of responses to ambiguous warning. As the results of this effort become part of NATO's readiness posture, the deterrent strength of the Alliance should improve substantially.

Yet the most timely and energetic response to warning will not help us much unless our military forces are continuously maintained at a appropriate state of readiness. The prolonged stringency in our defense budget has led to an

underfunding of the very things that determine the readiness of our Armed Forces--adequate manning and training, maintenance, supplies of spare parts, fuel, and ammunition. These needs, therefore, were accorded priority in the allocation of the defense budget.

As Secretary of Defense, I cannot confine my attention to the long-term recovery of our military strength--important as the sustained effort to build up our forces is. I am responsible to the President and to the nation for our security here and now, for a crisis that might come tomorrow. Improvements in readiness--apart from being essential for a strategy that is defensive--have the advantage that they can be realized soon. This need for quick improvement also inspired some of our decisions on the acquisition and reactivation of weapon systems. For example, the reactivated IOWA-class battleships, equipped with modern cruise missiles and electronics, and the deployment of cruise missiles on attack submarines, are quick ways to get more naval power to sea, at far less cost than building new ships of comparable power.

Preparations for large-scale military mobilization complement our policy of responding to ambiguous warning. Our existing military assets--personnel, arms, equipment, and supplies--would have to be assembled and deployed to the arena of threat or conflict. This requires planning and organization--and time. The faster we can marshal the men and their equipment and move them from the assembly points to where they are needed, the better prepared we are. What is needed are exercises and up-to-date planning. These too are low-cost measures that can go a long way to strengthen the deterrent effect of our forces.

Distinct from these preparations for military mobilization are the efforts we have initiated to repair our capacity rapidly to expand defense production. Our historic experience suggests that a major and acute crisis, threatening our national security, is likely to lead to a decision massively to expand our defense effort. For example, upon the outbreak of the Korean War, Congress decided on a three-fold increase in our defense budget, raising the level of defense spending to 13 percent of the Gross National Product. (The World War II peak was 45 percent.) But we would be complacent to assume that we could readily call on American industry today to accomplish comparable feats in expanding defense production. During the last 20 years, the capacity of our industry to respond to a new defense emergency has greatly deteriorated.

The improvements in the acquisition process that we instituted last year will help strengthen our defense industry. But more needs to be done. We are developing administrative and legal procedures for rapid industrial mobilization and are supporting the production of "long-lead" items and making other preparations to create the capacity for a surge in the production of certain weapons systems. These efforts will be coordinated with other government agencies through the Emergency Mobilization Preparedness Board, which the President established last December.

Restoring our capacity for expanding defense production is of very great strategic importance. This capacity helps to deter precisely the aggressive moves that might lead to such an expansion, and it plays a critical role in our policy for a conventional war.

3. Conventional Warfare

Our conventional forces must be designed for many different contingencies to cope with a wide range of threats. It is our aim to direct the development and improvement of our forces so as to create a better balance in meeting the different strategic requirements for U.S. conventional strength.

For many years, it has been U.S. policy to let the investment and planning for our conventional forces be determined primarily by the requirement for fighting a war centered in Europe, and in which NATO forces would be attacked by the Warsaw Pact. This emphasis recognized that Soviet military forces were concentrated in Central Europe. Preoccupation with the need to be strong in the center led to the mistaken assumption that if the Alliance could meet this largest threat, it could meet lesser ones.

In recent years, however, it has become increasingly clear that the members of the Alliance in the northern, center, and southern regions are bound together as one and critically depend on each other and even outside the NATO treaty boundaries--notably the Persian Gulf. At the same time, the Soviet Union has been greatly increasing its ability to exploit political instability and to project military power into precisely such areas.

The strategy we have been developing seeks to defend Alliance interests in such other regions. For the region of the Persian Gulf, in particular, our strategy is based on the concept that the prospect of combat with the U.S. and other friendly forces, coupled with the prospect that we might carry the war to other arenas, is the most effective deterrent to Soviet aggression. This strategy, thus, has two dimensions. First, we must have a capability rapidly to deploy enough force to hold key positions, and we must be able to interdict and blunt a Soviet attack. It is the purpose of this capability to convince enemy planners that they cannot count on seizing control of a vital area before our forces are in place, and that they cannot therefore confront us with an accomplished fact which would deter our intervention. Second, this strategy recognizes that we have options for fighting on other fronts and for building up allied strength that would lead to consequences unacceptable to the Soviet Union.

We are taking several actions to improve the ratio between the forces that the United States and the Soviet Union could bring to bear. The Soviets can use their interior lines of communication to change rapidly the front at which they might concentrate their forces for power projection. They can, for example, rapidly move airborne forces and air forces on their periphery and they can

shift BACKFIRE bombers to attack our fleets more rapidly than we can shift aircraft carriers between widely separated sea regions near the Soviet Union. We, however, can offset such moves if we make better use of U.S. and allied air, land, and sea forces and facilities; in particular, if we exploit the additional strengths these forces and their versatility bring to our allied total.

To this end, among other things, we are strengthening the interactions of surface naval forces with land-based airborne early warning and control aircraft and with land-based tactical aircraft. The added and more reliable warning time made possible by our Airborne Warning and Control System (AWACS), for example, can greatly increase the effectiveness of our deck launched interceptors, and the land-based tactical aircraft which might be used to protect the AWACS plane could also help defeat an incoming bomber raid. With appropriate plans and infrastructure, U.S. and allied land-based air can be moved swiftly and could even be moved in peacetime in response to ambiguous warning.

What is more, we can exploit more effectively the versatility of these forces, especially in strategically inter-connected areas.

If we had to deal with these threats without the complementary development of allied and other friendly nations' forces and facilities, we could only do so, if at all, at much greater cost. Security assistance, therefore, must play a large role in our evolving strategy. It is more important today because U.S. interests are threatened now in places that were less critical and better protected in times past.

This Administration has accordingly sought to strengthen our security assistance to allied and friendly nations. I see such assistance as serving both to support the complementary roles of U.S. and allied forces and to enhance the availability of overseas facilities we need to meet the increasingly widespread threats. Some of the essential forces and facilities are owned by allies and friends who cannot fund the desired force improvements on their own.

A necessary step for the intellectual reform of our policy regarding conventional warfare is to discard artificial definitions and contrived categories--habits of mind that obscure rather than clarify reality. I have already stressed the importance of realistic warning assumptions--that to plan for unambiguous warning is to plan for the type of warning that we are least likely to get.

Another case in point is the mistaken argument as to whether we should prepare to fight "two wars," "one and a half wars," or some other such tally of wars. Such mechanistic assumptions neglect both the risks and the opportunities that we might confront. We may be forced to cope with Soviet aggression, or Soviet-backed aggression, on several fronts. But even if the enemy attacked at only one

place, we might choose not to restrict ourselves to meeting aggression on its own immediate front. We might decide to stretch our capabilities, to engage the enemy in many places, or to concentrate our forces and military assets in a few of the most critical arenas. The geographic distribution of our assets must be guided by the prospects for protecting our vital interests and winning the war. We cannot settle this question in advance by defining the risk we confront as "one war" or a "war and a half." Moreover, the decision on how large our overall defense effort ought to be must be based on much broader and more fundamental judgments than some arbitrary and facile assumption about the number of "wars," or fronts, that we must be prepared for.

Another confusion in thinking to be avoided is the transposition of the defensive orientation of our peacetime strategy onto the strategy and tactics that should guide us in the event of war. A wartime strategy that confronts the enemy, were he to attack, with the risk of our counteroffensive against his vulnerable points strengthens deterrence and serves the defensive peacetime strategy. This does not mean that any allied offensive, using any means whatsoever and at any place other than the point attacked, would serve our purpose. Our counteroffensives should be directed at places where we can affect the outcome of the war. If it is to offset the enemy's attack, it should be launched against territory or assets that are of an importance to him comparable to the ones he is attacking.

Some important Soviet vulnerabilities have to do with the fact that the Soviet empire, unlike our alliance, is not a voluntary association of democratic nations. Thirty-seven years after free elections were promised at Yalta, the imposition of martial law in Poland makes clear how such elections would turn out if they were permitted. Our plans for counteroffensive in war can take account of such vulnerabilities on the Soviet side.

Strategic planning for counteroffensives is not provocative. It is likely to increase the caution of the Soviet leaders in deciding on aggression, because they will understand that if they unleash a conventional war, they are placing a wide range of their assets--both military and political--at risk.

Another fallacy in recent defense policy regarding conventional warfare has been the "short war" assumption--the notion that in planning our strategy and designing our forces we could rely on the assumption that a conventional war would be of short duration. Common sense and past experience tell us otherwise. I have therefore instituted changes in our defense policy to correct this fallacy.

It goes without saying that, should our policy to deter aggression fail and a conventional conflict be forced upon us, the United States would bend every effort to win the war as quickly as possible. The two wars in which the United States has fought since the beginning of the nuclear era, however, were both of long duration. Unless we are

so strong, or our enemy so weak that we could quickly achieve victory, we cannot count on a war ending within a few months.

The essential purpose of our conventional warfare policy is to prevent war by deterring aggression. Deterrence would be weakened if the enemy were misled to believe that he could easily outlast us in a conventional war. In particular, for a vulnerable and vital region like Southwest Asia, a U.S. strategy that promised our adversaries a "short war" could be an invitation to aggression. If we were unprepared to sustain the conflict, the adversary might expect we would have to seek a truce by conceding vital territory to his control.

The efforts that I have initiated to overcome the "short war" fallacy--improved sustainability for U.S. forces, a strengthened capability to expand defense production, and appropriate changes in strategy and tactics--are essential to reduce the likelihood of war. They are essential, in particular, for vulnerable regions protected neither by the presence of U.S. forces nor by an explicit nuclear guarantee. But they can also help buttress NATO's strategy of flexible response and the U.S. nuclear guarantee in behalf of the integrity of the Atlantic Alliance.

4. Nuclear Strategy

It is by intention that I have not treated nuclear strategy until now, except tangentially. This Administration does not regard nuclear strength as a substitute for conventional strength. However, it does place the highest priority on the long overdue modernization of our strategic forces. While this modernization program is not designed to achieve nuclear "superiority" for the United States, by the same token, we will make every necessary effort to prevent the Soviet Union from acquiring such superiority and to insure the margin of safety necessary for our security.

The United States will maintain a strategic nuclear force posture such that, in a crisis, the Soviets will have no incentive to initiate a nuclear attack on the United States or our allies. U.S. forces will be capable under all conditions of war initiation to survive a Soviet first strike and retaliate in a way that permits the United States to achieve its objectives. Nuclear weapons systems will not be funded merely to make our forces mirror Soviet forces according to some superficial tally of missiles or aircraft deployed in peacetime. Obtaining a facade of symmetry between U.S. and Soviet forces in terms of such simplistic counts is not a requirement for which I would allocate scarce defense dollars. Instead, our goal will be to gain and maintain a nuclear deterrent force which provides us an adequate margin of safety with emphasis on enduring survivability.

At present we spend some 85 percent of our total defense budget on non-nuclear forces, and that

accurately reflects our priorities. Non-nuclear capabilities would, in fact, receive an even higher priority in our budget had it not been for the fact that this Administration must cope with the severe inadequacies it inherited in the realm of strategic and other nuclear weapons.

President Reagan's decision last year on the modernization of major nuclear forces was based on a long-term view. The President had to choose not just one new weapon system, but all the major components of our strategic forces at the same time. These choices are likely to shape our overall strategic capability well into the next century. Strategic weapon systems, once deployed, tend to be part of our forces for many years. (The MINUTEMAN system for missile basing was determined more than 20 years ago; the mainstay of our present bomber force, the B-52, was chosen some 30 years ago.) The President recognized that his decisions on new strategic forces would predetermine, to a large extent, the strategic policies that the United States can adopt for years to come. Thus, the magnitude and scope of his decisions were almost unprecedented in the nuclear era. The only comparable review of strategic force needs and across-the-board decisions occurred in 1955, when President Eisenhower decided on the development of ICBM and IRBM forces and on systems for bomber basing and air defense.

The fact that this Administration had to decide how to replace or expand all the major elements of our strategic forces--bombers, ICBMs, SLBMs, and communications systems--was not without advantage. It permitted us to shape our strategic nuclear force as a coherent instrument responsive to national policy and to eliminate some dangerous contradictions between the capabilities of our nuclear forces and the objectives of our policy.

We recognized that, for the foreseeable future, our nuclear forces had to serve at least the following four purposes; (1) to deter nuclear attack on the United States or its allies; (2) to help deter major conventional attack against U.S. forces and our allies, especially in NATO; (3) to impose termination of a major war--on terms favorable to the United States and our allies--even if nuclear weapons have been used--and in particular to deter escalation in the level of hostilities; and (4) to negate possible Soviet nuclear blackmail against the United States or our allies.

The further spread of nuclear weapons would pose different security threats and risks depending on the industrial and technological capabilities of the proliferating nation. The development and testing of nuclear weapons by an advanced nation with near-term missile capability could have a significant impact on the global strategic situation. This could cause an alteration in US strategic planning and threat assessments. Nuclear weapons proliferation in less advanced nations would have a regional impact that could affect the ability of the US to influence developments in the region. The development of nuclear weapons by less advanced nations is unlikely to change the

basic missions of our strategic forces at least through the end of this century.

It is the purpose of our nuclear forces and strategy to prevent nuclear attack in all possible contexts and from all possible causes. We can never neglect the risk of a surprise attack "out of the blue;" a risk that imposes severe requirements on the survivability of our retaliatory forces and our supporting of command, control, and communications systems. However, we also must be prepared to strengthen nuclear deterrence during a period of heightened danger, in particular during a conventional war. In such a crisis, we can decrease the vulnerability of our strategic forces through increased readiness, dispersal, airborne alert, and other measures.

I feel it is important to guard against a narrow view of the dangers of nuclear war. Given the long lifetime of strategic systems, the full sweep of technological change that they may encounter cannot be predicted. Such a time period, moreover, may also bring major geopolitical change. But above all, the unpredictable dynamics of nuclear war, the unforeseeable interaction of attacks and counter-attacks, in all their ramifications, confront us--and Soviet planners--with vast uncertainties.

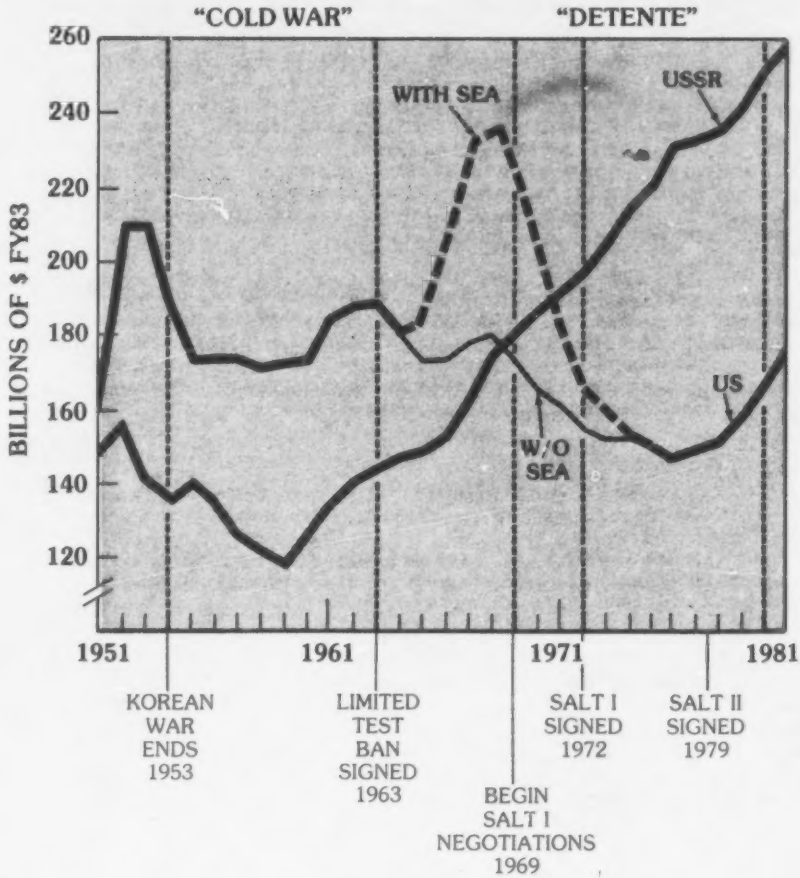
In particular, we need always to be mindful of the danger of accidents and unanticipated failures, both human and technical. Nuclear systems and procedures, therefore, must be as safe as we can make them. The care and emphasis bestowed on making our nuclear posture safer is a leading feature of President Reagan's force program that may not have been sufficiently appreciated.

5. Arms Control

A melancholy chapter in the troubled history of the last decade or two is that on arms control. Early in the 1960s, after many years of fruitless negotiations, the United States seemed to have reason for high hopes. The Limited Nuclear Test Ban Treaty of 1963 seemed to offer the imminent prospect of a much broader U.S.-Soviet understanding on nuclear arms that would slow down and eventually halt the nuclear competition and make the deterrent forces of both sides more stable and secure. Today, we have come to recognize the full extent of our disappointment. Despite the agreements we negotiated, the Soviet Union steadily increased its investment in nuclear strategic forces even though we reduced ours. Our land-based deterrent forces have become highly vulnerable even though one of our main purposes in SALT was to prevent such vulnerability. And Soviet nuclear offensive capabilities now exceed by far our most pessimistic forecasts of 15 years ago, when we estimated what might happen should our SALT efforts fail--as indeed they have.

Indeed, as Chart I.B.1 shows, not just in the nuclear domain, but in military expenditures as a whole, the trends during the "cold war" and "detente" were quite different from what one would expect.

CHART I.B.1
**US DEFENSE OUTLAYS AND ESTIMATED DOLLAR
 COST OF SOVIET DEFENSE ACTIVITIES DURING THE
 "COLD WAR" AND "DETENTE" PERIODS**



Recently, a set of facts has come to light that creates a most serious problem for any new arms agreement with the Soviet Union.

The United States now has many good reasons for believing that the Soviet Union has violated the Biological Weapons Convention--an arms control treaty negotiated, signed, and ratified when the illusions of "detente" were most prevalent. We have evidence of an inadvertent release of anthrax bacteria from a highly secured military installation in the Soviet city of Sverdlovsk during the spring of 1979. This incident points strongly, we believe, to biological warfare activities in the Soviet Union that exceed those allowed under the treaty for protective purposes. We regard the explanation provided by the Soviet government--that the outbreak of anthrax was due to natural causes--as inconsistent with our analysis of the evidence.

In addition to the Sverdlovsk incident, the United States and other nations have evidence of the use of lethal chemical and toxin weapons by Soviet and Soviet-supported forces in Laos, Kampuchea, and Afghanistan. Lethal toxins have been identified in samples from Kampuchea and Laos. Trichothecene toxins are not known to occur naturally in Southeast Asia at levels found in the samples and are substances whose use in war is clearly prohibited under the 1925 Geneva Protocol and the Biological Weapons Convention.

This accumulation of evidence, from many different sources and witnesses, raises a wrenching question for future arms control agreements. Our past approach to verification often relied on the theory that the Soviets would not risk violating isolated arms control provisions that were hard to verify, since there would always be some risk of detection, and to be caught would have damaging political consequences for them. In particular, this theory assumed there would be a vigorous condemnation by world opinion and a strong response by many governments. What is now left of the validity of this theory?

Our approach to arms control should be that we negotiate to achieve agreements that diminish the risks of war and help reduce the threat to our security and the security of our allies. Cosmetic agreements--those that would merely legitimize a further buildup of Soviet military power--are not in our national interest. When serious opportunities arise to negotiate agreements that significantly reduce the present level of armaments in a fair, balanced, and verifiable manner, we should pursue them vigorously. President Reagan's historic offer to terminate our plan to deploy cruise and PERSHING II missiles in Europe if the Soviets will dismantle their SS-20, SS-4, and SS-5 missiles and limit other missiles that could substitute for them is the sort of arms control proposal that meets these criteria. We shall work hard to gain its acceptance.

This Administration recognizes that genuine and mutual understandings for the control and reduction of armaments can make a major contribution to our security and to world peace. We are committed to seeking balanced and verifiable arms control agreements which result in substantial reductions in nuclear arms. The serious present difficulties will not deflect us from this long-term goal.

6. The Foundation for Long-Term Improvement

For the long term our prospects are bright, provided we take prudent advantage of the great assets of the Free World--the resilience of democratic nations, the productivity and innovativeness of capitalism, the vigor of free societies. As President Reagan said, "the West won't contain Communism, it will transcend Communism." To transcend in peaceful competition, the United States and our allies need a long-term strategy that will build on our strengths with determination and persistence. With equal determination and persistence, this strategy must ensure that the weaknesses of our adversaries have their full impact.

The peaceful competition--in economic productivity and scientific creativity, in social progress and cultural achievement--is all in our favor. The only domain in which Soviet communism has not proved to be a failure is the practice of military imperialism. In this domain, the Soviet Union has steadily moved ahead. It has conducted, and is still conducting, the biggest military buildup of modern times. It has expanded, and is still expanding, its imperial reach by establishing or consolidating military outposts throughout the world--in the Middle East, Africa, Indochina, and elsewhere. If the Soviet military buildup continues unabated, if Soviet imperial expansion is not reversed, if the Soviets see themselves steadily and easily gaining in military strength, our ability to deter aggression will be inexorably weakened. Moreover, the Soviet incentive for arms control would vanish.

For the natural strength of free societies to prevail in the long run, our defense strategy must do two things. First, it must bring to a halt the further expansion and consolidation of the Soviet military empire, whether this expansion would proceed through direct Soviet military intervention (as in Afghanistan) or through less direct intervention (as in Angola, Nicaragua, and elsewhere). Second, our strategy must see to it that the productivity and technological creativity of free societies are not exploited to make good the chronic deficiencies of the communist system.

If the economy of the Soviet empire is propped up by Western credits, the Soviet Union is enabled to divert more of its resources to its military buildup. If the Soviet Union earns foreign currency by exporting raw materials to our allies, it can purchase more equipment to

facilitate its arms production and give more to its client states. If it continues to obtain advanced technology from the West, it can later threaten us with the advanced weaponry.

Soviet trade with the United States and its allies amounts to some two percent of its national product. It is nevertheless critically important for the Soviet system, since a major weakness of the centrally-planned economy is its slow rate of innovation. Without constant infusions of advanced technology from the West, the Soviet industrial base would experience a cumulative obsolescence, which would eventually also constrain the military industries. The Soviet leaders must know full well by now that their central planning system is fatally flawed. But their system cannot be reformed without liberalizing Soviet society as a whole. Hence, without access to advanced technology from the West, the Soviet leadership would be forced to choose between its military-industrial priorities and the preservation of a tightly-controlled political system. By allowing access to a wide range of advanced technologies, we enable the Soviet leadership to evade that dilemma.

Thus, the infusion of new technology from the West helps preserve the Soviet Union as a totalitarian dictatorship. And, of course, if the Soviet Union were less totalitarian, it would also be less of a military threat, since a less controlled and more liberalized regime could not possibly allocate so much of the nation's resources to military expenditures.

One reason sometimes cited for trading with the Soviet Union is the possibility of gaining political concessions from the Soviet leadership in exchange for the technologies and commodities that it needs from the West. Although there is seemingly an ample opportunity to do that, many in the West decry any "linkage." Indeed in a reversal that is a testimony to the degree of our past blindness to reality, it is the Soviets who do the manipulating--and with considerable success--in spite of their inherently weak bargaining position. In fact, the Soviet Union has brought into existence powerful interests in the West which now press for even more generous trade policies toward the Soviet Union.

In the nuclear age, more than in any other period in human history, military strategy must be the servant of national policy, a policy that is the ultimate trustee of the nation's interests. But to paraphrase Clausewitz, policy cannot make demands on military strategy which strategy cannot fulfill. I have the responsibility as Secretary of Defense to tell you that, in my view, no defense policy, no strategy, could succeed in the long run unless we pay close attention to the foundations for military strength. We must pursue a policy that ensures that our resources will not be diverted to strengthen our adversary but instead fully serve the cause of freedom. I must also remind you that whatever strengthens the Soviet Union now, weakens the cause of freedom in the world.

C. MAJOR INITIATIVES

Over the past year, we have taken major initiatives in six broad areas:

- The heart and soul of any military force are people. We found pressing needs in this area--to improve our ability to recruit and retain the high quality men and women we need in uniform today.
- Given the world as it is, we must be ready to fight on short notice in a variety of places around the globe, and to carry on the fight until it is won. This means enhancing the readiness, mobility, and sustainability of our forces.
- At the same time, we must move forward more vigorously than before to expand and modernize our forces to meet the increasing demands we face.
- We cannot do all of this alone, so we must encourage our allies and friends to do more in the common defense.
- While addressing these critical problems, we could not ignore a whole set of pending decisions regarding strategic nuclear forces, some of which were long overdue.
- Throughout all of this, we are determined to spend the taxpayer's money as efficiently and effectively as possible, which led us to a major overhaul and tightening of DoD management systems and the way we do our business.

1. The Importance of People

No military force, no matter how sophisticated its equipment, will be any better than its people. Unfortunately, during the last few years not enough attention has been paid to the people in our armed forces--to their needs, their problems, their aspirations. The consequences of this neglect were predictable: the size of the Armed Services declined, the quality of accessions fell off sharply, and retention dropped substantially. There were many who took these facts as evidence that the All Volunteer Force had failed. But it was the implementation that was flawed; not the concept.

President Reagan's program for rebuilding our military strength has accorded top priority, therefore, to the men and women of our Armed Forces. This Administration is committed to making the All Volunteer Force a success.

Working together with the Congress, we have taken a number of steps to remedy past neglect and the results of last year make us confident that we are on the right track. Although our efforts have just begun, we can already observe genuine improvements. For the first time in over a decade, force size is beginning to increase: the end strength of the Active and Selected Reserve grew by 80,000 in FY 1981 alone. And we plan to continue to make increases of this magnitude each year through FY 1987 so that we can meet our worldwide military needs.

a. Recruiting

In FY 1981, for the first time since the FY 1976 each of the four Military Services met or exceeded its enlisted recruiting target. Overall, the Department of Defense recruited more than 327,000 new enlistees in FY 1981--101 percent of its goal. Dramatic improvements were achieved during the year in the levels of education and competence of the new recruits. DoD recruited nearly 265,000 high school graduates in FY 1981, up 9 percent from FY 1980. In addition, recruits with high school diplomas comprised 81 percent of all new recruits during the year, compared to only 68 percent in FY 1980. Even the Army, which has historically had the most difficult time attracting well-qualified individuals, recruited 80 percent high school graduates in FY 1981, compared to only 54 percent in FY 1980. The proportion of new enlistees scoring in the lowest acceptable range on the entrance examination dropped to 18 percent in FY 1981 from the FY 1980 level of 31 percent.

In spite of these successes, we still have a long way to go. It will take the Services several successive good recruiting years to make up for past shortfalls. Moreover, recruiting will become more difficult in the next few years as Congressionally-imposed quality constraints force us to narrow our recruiting base further in FY 1982, and even more in FY 1983. Unless we obtain some relief from these constraints, by FY 1983 we will be forced to recruit 80 percent of our recruits from 70 percent of the youth population. Anticipated improvements in the economy and a continuing decline in the youth population will compound the difficulty of recruiting. However, if military service continues to be regarded by the American people as a worthwhile profession, and if Congress maintains pay and benefits at the present competitive levels, we are confident that we can meet the need for increased military manpower, and that our Armed Services will continue to increase in quality. Both as Secretary of Defense and Chairman of the President's Military Manpower Task Force, I will do my best to ensure that this occurs.

b. Retention

Current reenlistment rates are among the highest ever experienced by the U.S. Armed Forces. First-term reenlistment in FY 1981 climbed to an all-time high of 43 percent, compared to only 39 percent in FY 1980. Reenlistment among career personnel increased from 70 to 86

percent from FY 1980 to FY 1981, registering a gain for the second consecutive year. As a result of these increases in retention, the experience mix of the U.S. military continues to improve. Currently, the proportion of our active duty enlisted personnel who have five years or more of military experience is 43 percent, compared to approximately 39 percent at the inception of the All Volunteer Force.

Maintaining good retention rates is one of the keys to increasing our force strength. Here, too, we must maintain the momentum of FY 1981 for several years in order to make up for the lean years of the late 1970s. When we lose a middle grade Noncommissioned Officer or Petty Officer, the effect on the force is substantial. Not only do we lose his or her experience, but we must increase the number of recruits by a factor of three or four in order to replace the career person.

c. Compensation

The movement toward reestablishing adequate levels of compensation for our military personnel was important in the success of the All Volunteer Force in FY 1981.

Since the All Volunteer Force began in 1973, military compensation had eroded significantly in comparison to other sectors of our economy. Beginning with the Nunn-Warner Bill in late FY 1980 and continuing through FY 1982, it has been restored to more favorable levels through several initiatives of this Administration and the Congress. In September 1980, the Nunn-Warner Bill established payment of a variable housing allowance, increased basic allowance for subsistence rates by 10 percent, enhanced permanent change of station travel reimbursements, increased flight pay by 25 percent, and increased sea pay rates by 15 percent.

The FY 1981 Department of Defense Authorization Act provided an 11.7 percent pay raise for all military personnel, increased per diem rates and enlistment and reenlistment bonuses, extended reenlistment bonuses, and authorized an aviation continuation bonus. Several additional improvements in military compensation were made in FY 1981 by the Military Pay and Allowances Benefits Act of December 1980, the major ones being a substantial increase in submarine and sea duty pay and the establishment of career sea pay for officers.

Finally, in FY 1982, the Uniformed Services Pay Act of 1981 provided an overall 14.3 percent pay raise, increased the rates and expanded the eligibility for hazardous duty incentive pay, provided increases in aviation career incentive pay, and enlistment bonuses, authorized a 3-year enlistment bonus program for the Army and a scientific and engineering continuation bonus for officers, and made a number of improvements to travel and transportation allowances.

Providing fair compensation to our military members demonstrates that the American people appreciate their sacrifices and recognizes that military people must maintain a decent standard of living for themselves and their families.

d. Training

This year several initiatives were begun to enhance the training programs of the Services--an area of importance to the All Volunteer Force. Army readiness was improved by returning approximately 20,000 soldiers from a "borrowed labor" category to their regular units. This realignment was made possible through increased civilian end strengths and additional contracting. The Army also improved its unit readiness by increasing the length of basic training by one week, by programming additional dollars for training ammunition, and by opening the National Training Center at Fort Irwin, California.

The Air Force decreased the on-the-job training burden on its NCO corps in operational units by increasing its initial skill training by one week. A Joint Jet Pilot Program, instituted at Sheppard Air Force Base, Texas, trains pilots of our NATO Allies alongside U.S. pilots. In addition, increased flying hours for all the Services were programmed in the FY 1983 budget.

Not only does proper training improve readiness, but it provides job satisfaction and increases the motivation of the military person. Few things are more demoralizing to a member of the Active Forces or selected Reserve than to get no chance to develop his or her potential.

e. Cost

Too often, the need for improvements in military compensation programs become obscure by perceptions that personnel costs are rising at a disproportionate and accelerating rate which the nation is unable to afford. The fact is that this is not the case at all. The share of the DoD budget that goes for personnel (including retired pay) has declined every year since 1975--from nearly 60 percent in FY 1975 to 41 percent of the planned FY 1983 budget outlays. Even with the significant military compensation improvements granted last year, the personnel share of the budget is seven percent less than in FY 1981. These cost compare favorably with manpower costs in labor-intensive industries which run about 48 percent of expenditures.

These data indicate very clearly that if we continue to provide military members adequate compensation, we can attract and retain enough qualified men and women to meet our military needs. Further, we are confident that the All Volunteer Force (AVF), properly managed, can work.

2. Readiness and Sustainability of Conventional Forces

About 85 percent of our entire defense budget is devoted to non-nuclear forces. This large fraction of the budget is subdivided into the costs of military pay and allowances; research, development and acquisition of new weapon systems and military equipment; ammunition, spare parts, fuel and other consumables and other operations, maintenance and support costs. Among these items, two broad categories require special attention: readiness and sustainability.

Readiness is the ability of a forces, units, weapon systems, or equipments to deliver the outputs for which they were designed (including the ability to deploy and employ without unacceptable delays). It depends on having the required quantities of equipment in the hands of the units on a day-to-day basis, and on having the required number of adequately trained people assigned with the necessary mix of grades and experience level and to ensure that people and machines can work together.

Sustainability groups together items needed by forces to sustain combat in the event of war. It includes replacement equipment, spare parts and ammunition, fuel and other essential consumables. Sustainability also includes the manpower required to maintain combat strength--to rotate, replace, and reinforce as the course of battle demands.

Sustaining our forces with materiel in the early stages of a conflict must depend upon the war reserve inventories of ammunition, combat equipment, spares, and other combat-essential items acquired in peacetime. If conflict continues, the source of our materiel sustainability would shift increasingly to new production. Our initial manpower requirements would come from the trained personnel already assigned to active and reserve units in peacetime. Additional pools of obligated, trained people would be used upon mobilization to fill active and reserve units to wartime strength and to replace casualties during the early months of war. As the war continued, we would then become dependent upon volunteers or inductees to sustain the manpower needs of the Services. New inductees and volunteers require training before they can be assigned to combat--thus they would not be deployable during the first several months of conflict. (The law currently requires 12 weeks of training before inductees can be assigned overseas.)

No matter how large our forces or how modern our military equipment, if our forces are not ready to fight, or if they cannot be sustained once engaged, we have no real combat capability. When I assumed responsibility as Secretary of Defense, I inherited serious deficiencies in the readiness of our forces (both in manpower and materiel), extremely austere inventories of those war reserves needed for critical, immediate sustainability, and a generally antiquated and debilitated defense industrial base.

My most urgent requests this first year are designed to correct these deficiencies. To meet our immediate personnel readiness needs and to ensure our continued reliance on the All Volunteer concept, we are committed to: (1) securing fair and adequate compensation for those now serving in our Military Services; (2) providing a predictable, stable, and easily understood military pay increase adjustment mechanism to sustain the appropriate relationship between Service compensation and the pay of the private citizens whom our armed forces protect; and (3) providing living and working conditions that are attractive enough to encourage continued military service by trained and experienced men and women.

We also accord a high priority to redressing inherited deficiencies in materiel readiness. We seek appropriations for our current forces to maintain a level of day-to-day materiel readiness that would permit them to move into combat with short warning if necessary. Because the warning time is likely to be short and the time required to correct readiness deficiencies is long, we must and will insist that the readiness of current forces be brought to higher levels before we modernize equipment or increase the size of our forces.

Adequate readiness ensures that we could respond quickly to a crisis or the outbreak of hostilities--a capability that is necessary but not sufficient. We must also be able to sustain our forces during conflict.

Again, we have adopted the policy of acquiring, as soon as possible, combat sustainability at least equal to that of the threats we face. Under this policy, procurement of the stocks needed for immediate combat sustainability has nearly as high a budget priority as necessary improvements in readiness. Beyond that, we will continue to increase our war reserves gradually so that those inventories, complemented by a broader and more responsive industrial production base, will give us the capability to sustain our combat forces for the likely duration of conflict.

3. Conventional Force Expansion and Modernization

Although improving the combat readiness and sustainability of our conventional forces has, of necessity, been a high-priority concern for the Reagan Administration, we must, however, also provide for the modernization and expansion of our conventional forces to meet the clearly growing threat.

Here again our neglect in the past coincided almost exactly with the increasing Soviet threat. We must modernize and expand quickly if we are to continue to be able to deter aggression.

Beginning with the FY 1981 Budget Supplemental and FY 1982 Budget Amendment proposals last February, this Administration increased substantially the investment

in equipment for conventional forces. I am requesting a continuation of this investment in the present budget and propose to continue a significant conventional investment program over the next five years.

Under this five-year plan, our ground forces will be receiving additional quantities of both weapon systems and support equipment. Compared to the final Carter plan, our ground forces will get 29 percent more M-1 tanks, 34 percent more fighting vehicles, 25 percent more attack helicopters, and 11 percent more utility helicopters, to cite some of the more cogent examples. Although this materiel will not allow for much expansion of Army force levels, it will go a long way toward eradicating the most serious of the Army equipment problems that the Reagan Administration inherited. In practical terms, the added quantities of tanks and fighting vehicles will provide modern weapon systems to three and a half more divisions than would have received them under the Carter Administration budgets.

Air Force and Navy/Marine Corps tactical air will also be modernized at more rapid rates and expanded modestly. We estimate that the Carter program would have provided something less than 4,200 fighter/attack aircraft for the Air Force, with an average age of 12.0 years. Our program will provide over 4,800--a 15 percent expansion--with an average age of 10.8 years. For the Navy and Marine Corps the force will increase from roughly 1,770 to 1,930 aircraft--an 9 percent increase--while average age will decline from 10.2 to 9.6 years. This represents an important step toward meeting the ideal average age for our tactical aircraft inventory--10 years for Air Force aircraft and 7-1/2 years for Navy aircraft.

It is vital to expand and keep modern our tactical air capability because it can react flexibly to ambiguous warning, deploy quickly to distant regions, provide support for outnumbered ground forces, and deliver considerable firepower.

The most significant force expansion proposed by the Administration centers on the Navy, particularly those components of it that have offensive missions. By the end of this decade, President Reagan's program ship total will exceed that planned under the Carter Administration by about 15 percent. The two new nuclear-powered carriers in our program will allow us to replace aging MIDWAY-class carriers by the early 1990s. Without these additions, for which the Carter program had no plan, our deployable carrier force in the early 1990s would have declined from 13 to 12 decks. The Reagan program will more than double the Carter Administration's planned attack submarine production, permitting both replacement of aged vessels and a small force increase. Carter effectively had no program for modernizing our amphibious fleet; as a result, our capability to lift amphibious forces would actually have declined in the 1980s. This Administration's ten amphibious ships will give us a good start toward countering the block obsolescence that threatens our amphibious lift shipping in the 1990s. And the four refurbished battleships provided under

the Reagan program will give us unique offensive capabilities and will be the nucleus of four surface combatant battle groups.

Because we face a large backlog of modernization requirements, and because our first priority is restoring the readiness of forces we already have, the pace of modernization must be slower than would be desirable, given the substantial demands that our military forces should be prepared to meet. Nor can we increase the level of defense forces as much as might be prudent. In all of our conventional force investment efforts, we have attempted to correct weaknesses in the defense industrial base and to achieve greater efficiency in production. Sustained Congressional support will be necessary to field the strong conventional forces required to meet the threat.

4. Cooperating with Allies and Friends
and the Role of Security Assistance

a. Security Assistance

It is so obviously to the advantage of the United States, of our allies, and of the free world, to have a strong network of alliances that no further advocacy should be required. Yet, every year military assistance and training funds are regularly held up, reduced, and sometimes denied. The inevitable result of this will be far higher defense expenditures for the United States.

In the past year we have built closer defense relationships with friends in Southwest Asia and the Middle East. We have strengthened our military cooperation with Morocco, Saudi Arabia, Sudan, Somalia, Oman, and Pakistan. Joint military commissions with Egypt, Morocco, Tunisia, and Jordan have been established and are being explored with other countries. These commissions provide a useful forum for security discussions and facilitate monitoring and planning of programs of military cooperation.

Like our own, the defense requirements of our friends and allies have increased. Our security assistance program is designed to assist in meeting their defense needs while enhancing the collective security of the Free World, thus complementing U.S. defense efforts and strengthening our own security. Security assistance also facilitates obtaining important access, and overflight base rights abroad, and encourages rationalization, standardization, and interoperability with our allies. Other benefits include an expanded defense industrial mobilization base and reduced procurement leadtimes.

The cost of military assistance to the U.S. taxpayer is not onerous (Chart I.C.1). In FY 1980 it was less than \$13 per person--the lowest level in 30 years. In 1981, the grant element of our military assistance dropped below \$1 billion, or less than one-twentieth of the 1952 level. The sharp reduction beginning in 1973 reflects previous Administration's and Congress' decisions to phase out the grant aid program. We now see the need for more

on-budget funds for grant aid, or loans at concessional interest rates, since important parts of our defense strategy rely on the cooperation and capabilities of a growing number of friendly countries that have critical defense needs but overburdened economies.

Although the dollar value of U.S. military related exports has risen over the long term, the ratio of military assistance to the U.S. defense budget has steadily declined from its 1950 peak of 9.5 percent. Current military assistance funding levels even at less than two percent of the defense budget, provide a high-dividend return on the dollar investment and are a particularly cost-effective instrument of U.S. policy (Chart I.C.2).

These declining trends in our security assistance program have occurred in the face of considerable increases in the military assistance efforts of the Soviet Union. For example, there was a five-fold increase in Soviet arms sales to the Third World from 1978 to 1980 (Chart I.C.3). This dramatic leap in Soviet sales is a significant indicator of the Kremlin's willingness to exploit political and military opportunities as they arise throughout the world. During the same period, American policy was not sufficiently flexible to meet the challenges of a rapidly changing international environment.

b. Treaty Relationships

The value of formal treaty relationships is greatly enhanced by continuing and realistic provisions for security assistance.

The North Atlantic Alliance is the principal alliance to which the United States has committed its defense resources. The Alliance continues to bring together its members in the common cause of collective defense and provides the forces to deter Soviet aggression.

The Atlantic Alliance is not without its problems. A collection of 15 sovereign states, dedicated to the proposition that an attack against any is an attack against all, is bound to encounter difficulties of a military as well as a political nature. But, despite the problems, the Alliance remains strong and determined and continues to reflect a remarkable consensus on the fundamental issues of deterrence and defense.

Through extensive consultation and concerted action, we have moved to strengthen the North Atlantic Treaty Organization. The Administration has sought and received a reaffirmation of the important NATO goal of annual real increases in defense spending. We have sought and received from our allies an increased recognition of threats to the Alliance that originate outside the NATO area, and we have engaged in consultations on how the Alliance might act in concert to facilitate meeting those threats. There is strong support within the Alliance to maintain the momentum for the modernization of NATO's nuclear forces. And the members of NATO have supported the President's unprecedented offer to the Soviet Union to

CHART I.C.1

**COST TO TAXPAYERS:
TOTAL GRANT PROGRAM**

(CONSTANT FY '82 \$: BILLIONS)

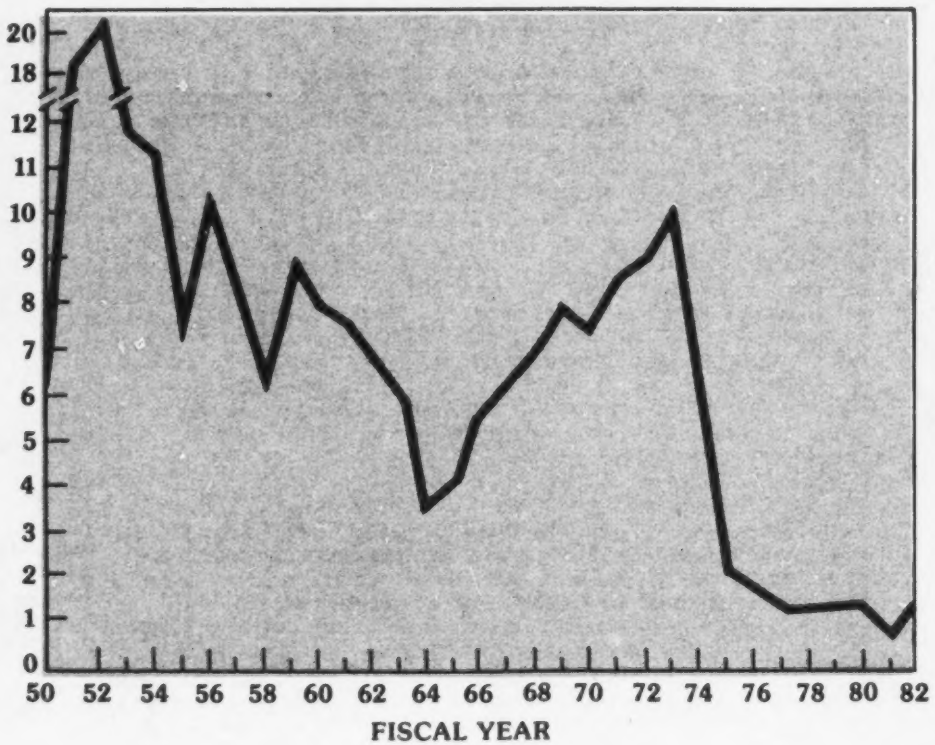


CHART I.C.2

**SECURITY ASSISTANCE AS A PERCENTAGE
OF THE DEFENSE BUDGET
(CONSTANT FY 1982 DOLLARS)**

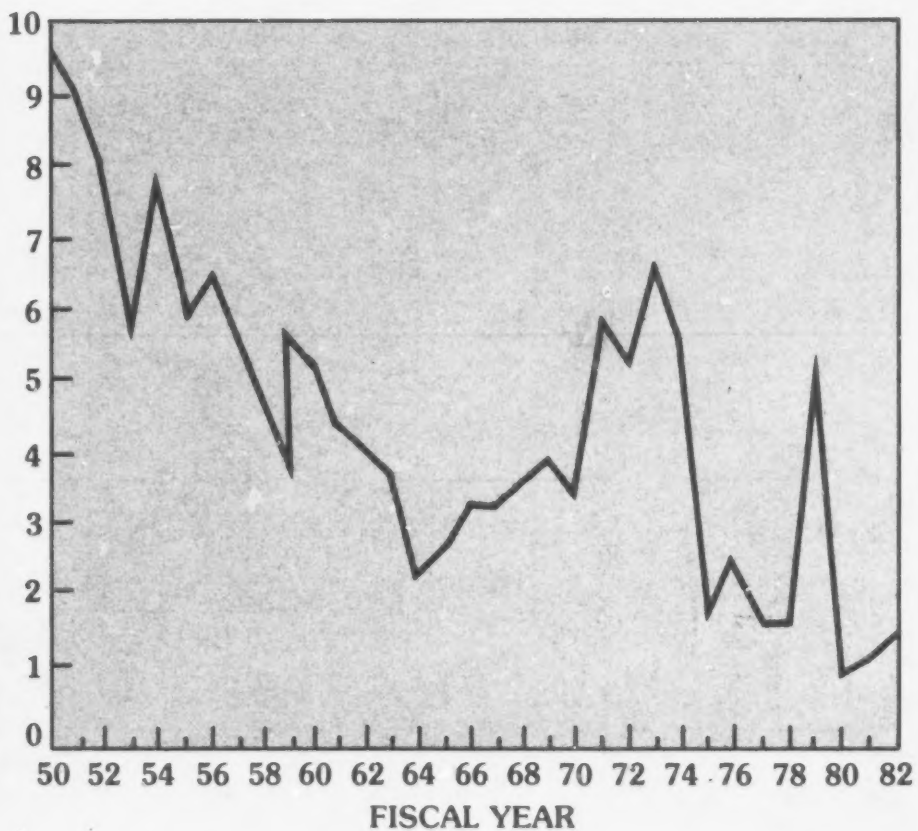
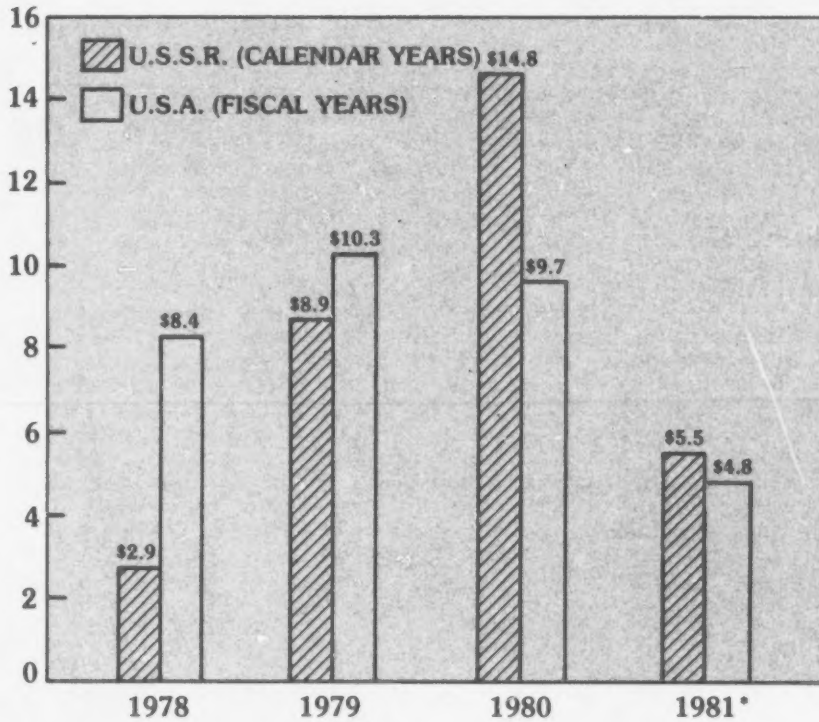


CHART I.C.3
**U.S. AND SOVIET ARMS SALES
TO THE THIRD WORLD**
(IN BILLIONS OF DOLLARS)



*SOVIET FIGURE INCLUDES SALES AS JUNE 30, 1981;
U.S. FIGURE INCLUDES FULL FISCAL YEAR SALES

terminate the deployment of U.S. intermediate-range nuclear missiles in Europe if the Soviets will dismantle their intermediate-range nuclear missiles.

Cooperation with our NATO Allies greatly multiplies the effectiveness with which our own defense resources are marshalled to protect our national security. We have called upon our NATO Allies to facilitate our efforts to provide for the security of Southwest Asia. We have made it plain to them that their cooperation is vital if we are to be able to concentrate our forces in Europe and still make them applicable, in a crisis, to other areas. We will continue to press for concrete measures to accomplish this.

We have stressed the importance of allied solidarity in the face of growing Soviet military power. And we have for the most part achieved that solidarity through close consultation and collaboration. Several of our NATO allies have managed, despite economic difficulties, significantly to increase their defense investment. Others, though, have fallen short. All are agreed that more needs to be done if stable deterrence is to be maintained. We will continue to lead by example, urging each of our allies to join with us in making the additional sacrifice that the unremitting growth of Soviet military power has forced all of us to bear.

Concern in Europe about the danger of nuclear war has led to protests and demonstrations, often calling for policies that Western governments recognize would do irreparable harm to the integrity of the Alliance and the safety of its people. We are determined to lead the alliance through the current period of concern and anxiety, pursuing a sound military strategy in consultation with allied governments. Neither we nor our allies can permit the flaring of emotions to deflect us from the urgent requirement to preserve the peace by maintaining our strength. Confident that the overwhelming majority of free citizens in all the sovereign countries of the alliance remain committed to our common defense, we will show, in Churchill's memorable phrase, the "will to stay the course."

The United States is allied by treaty with six Asian and Pacific nations: Japan, Australia, New Zealand, The Philippines, Thailand, and the Republic of Korea. Japan, with whom we have a Treaty of Mutual cooperation and Security, plays a vital role in maintaining regional stability and is the cornerstone of the US forward defense strategy in the Asian-Pacific region. Japan already contributes toward the achievement of shared security objectives, both economically and with its own improving self-defense capability. However, much remains to be done to expand Japanese defense capabilities responsive to the threat in Northeast Asia.

Australia and New Zealand, allied with us by the ANZUS mutual security pact, contribute to Western security by focusing their efforts on the Southwest Pacific

islands and the support of friendly Southeast Asian nations. Australia has also increased its presence in the Indian Ocean and its support for transitting U.S. forces. The Philippines, to whom we are linked by a mutual security treaty and by the Manila Pact, enhance our ability to project power throughout East Asia and into Southwest Asia by providing continued use of Clark Air Base and Subic Naval Base. Additionally, although non-aligned, Malaysia, Indonesia, and Singapore support U.S. presence in Southeast Asia and allow unhampered U.S. transit of the vital Indonesian straits. Two of our Asian allies, Korea and Thailand, which face hostile forces across their borders, have U.S. assistance to bolster their self-defense improvements. In Korea, U.S. forces help maintain deterrence and preserve peace and stability.

By funding nearly the full amount of the Administration's FY 1982 request for foreign aid, Congress has recognized that an effective security assistance program serves American interests well. Congress has supported legislative initiatives, including creation of the Special Defense Acquisition Fund and removal of restrictions on assistance to key regional partners, that have further enhanced the effectiveness of the program. We expect continued progress in FY 1983 and beyond (Table I.C.1).

TABLE I.C.1

Security Assistance Program Growth in the 1980s

	<u>1981</u>	<u>1982</u>	<u>1983</u>
<u>Total Programs</u> (Constant FY 1982 Dollars In Billions)	6.0	6.8	8.2
<u>Percentage Breakdown of Programs</u> ^{1/}			
Foreign Military Sales Credits			
Guaranteed Loans	46.5	45.3	44.9
Concessional Loans	—	—	14.2
Forgiven Loans	9.1	11.0	5.7
Military Assistance Program	3.1	3.1	1.1
Economic Support Fund			
Grant	35.1	34.7	22.8
Direct Loan	5.0	3.0	10.2
International Military Education and Training	.5	.6	.6
Peacekeeping Operations	.6	2.2	.5

^{1/} Percentages may not total 100 percent due to rounding.

The security problems in Central America and the Caribbean are likely to require greater attention and resources. In the event of a major conventional war, the Soviet presence in Cuba and Cuba's armed strength could present a direct military threat to the southeastern United States and to the South Atlantic seallanes. This imposes an added burden for the defense of our Alliance.

At the present time, however, Cuban and Soviet intervention in Central America and the Caribbean poses the more immediate danger. In view of the potentially serious threat to American security interests there, the Caribbean Basin must receive higher priority and far greater resources than in the past. In order to gain time to address the underlying political, economic, and social problems of the region, we must cooperate closely with our neighbors. We must halt terrorist aggression and deter further military attacks in the hemisphere. A failure to respond to the current threat would only lead to far greater human and material costs in the future.

The government of El Salvador, unlike Nicaragua, seeks to fulfill its pledge to hold elections. But the terrorists and guerrillas supported by Cuba and the Soviet Union attempt to deny the people of El Salvador the opportunity to build a pluralist democracy, to complete their land reform, and to restore the economy. The Government of El Salvador needs our help to restore security for its people.

In September, the Defense Department dispatched a team of experts to El Salvador to assist the Salvadorans in developing a national military strategy. While some recommendations of the team are currently still under review, others are already being implemented. The Salvadorans have requested, and we have agreed to provide, out-of-country training for about 500 to 600 officer candidates, for a light infantry battalion of about 1,000 men, and for noncommissioned officers. This training began early in 1982. Salvadoran requirements far exceed planned FY 1982 foreign military assistance and training levels. Thus, we will need the support of the Congress to fund this urgent need and respond in a timely manner.

We are continuing to provide small Mobile Training Teams to train personnel in areas such as maintenance and coastal patrolling in which there are deficiencies. Equipment provided through Foreign Military Sales includes communications equipment, helicopters, weapons, and trucks that should allow the Salvadoran forces to improve their mobility, command and control, and ability to interdict insurgent supply lines from their external suppliers. This effort is being supplemented by support from other concerned Latin American countries. The favorable consensus that was developed at the Fourteenth Conference of American Armies in November and more recently at the Organization of American States meeting in St. Lucia, suggests an awareness among many nations in the hemisphere that they must work

together to enhance their common security. Both by long-standing policy and by the Rio Treaty, we are committed to join with our Latin American Allies in "mutual assistance and common defense of the American Republics."

5. The Forces for Nuclear Deterrence

Last fall, President Reagan decided on a comprehensive program for revitalizing our strategic nuclear deterrent. This program will end the decline of U.S. strategic capabilities relative to Soviet forces and create a deterrent that is far more stable and secure than exists today.

Our strategic program is affordable; it fits within the amounts decided upon in March 1981 for strategic programs for the next six years. Direct costs associated with the strategic force buildup of the early 1960s consumed over 30 percent of the total defense budget. President Reagan's program for strategic forces, while consuming less than 15 percent of defense spending over the next five years, will give us the greatest addition of modern, strengthened strategic forces planned and funded by any United States President.

The period in the mid-1980s when major and critical components of our present strategic deterrent forces could be destroyed by an enemy surprise attack is our most vulnerable period. This period of added vulnerability--and hence risk--looms before us because the United States failed to modernize or strengthen its strategic forces while the Soviets have never slowed their strategic buildup. We must regain our momentum now. Most strategic systems take a long time to bring on line--often as much as a decade. That is why parts of this program are specially designed to secure additional strength for the near term, while at the same time we build the long-term strategic forces we need but cannot deploy until the end of the 1980s. This is an area of such importance that we cannot leave any gaps.

Accordingly, the President's program consists of five mutually reinforcing elements:

- First, improvement of our communications and control systems, perhaps the most urgently needed element of our entire strategic program. We must have survivable systems that would, under all circumstances, detect, identify, and report a nuclear attack. We must be able to communicate with our strategic forces before and after such an attack, so as to control and coordinate our response. Our command and control systems will need major improvement if they are to survive endure, and be useable. The President's program provides for those vital needs.

- Second, modernization of our manned strategic bomber force so that it retains the capability to penetrate Soviet air defenses.
- Third, deployment of new, more accurate, and more powerful submarine-launched missiles--the most survivable of our nuclear offensive systems.
- Fourth, a step-by-step plan to improve the survivability and accuracy of new land-based intercontinental ballistic missiles (ICBMs) and to reduce their vulnerability.
- Fifth, improvement in strategic defenses including civil defense to help deter nuclear attack, and to degrade its effectiveness if it is attempted.

a. Command, Control, and Communications Systems

To improve our warning capability, we will upgrade the survivability of our warning satellites and ground terminals and augment their capacity so we could obtain more definitive warning should a nuclear attack be launched. Additional surveillance radars, which would help us detect an attack from submarines, will be constructed to cover potential operating from submarines, will be constructed to cover potential operating areas of Soviet strategic submarines to the southeast and southwest of the continental United States.

To upgrade the capability and survivability of our command and control systems, we will deploy advanced airborne command posts to serve the National Command Authority in time of war and we will harden existing airborne command posts against nuclear weapons effects.

We will develop a new satellite communications system employing extremely high-frequency channels so the President's orders can be passed from the national command center to the commanders of our forces and the forces themselves and so we can better manage our forces in a protracted war. Our bombers will be equipped with very low-frequency receivers to enhance their ability to communicate. Our ballistic missile submarine force will also receive an upgraded communications package.

b. Bomber Forces

The previous Administration was willing to live with the risks of an aging B-52 force for the 1980s and the uncertain schedule and unproven capabilities of an

advanced technology bomber (ATB or "Stealth") for the 1990s. We have chosen a far less risky course. Our program will provide much-needed capability earlier in the 1980s.

Specifically, we will develop and deploy a force of 100 B-1B bombers, with an initial operating capability in 1986. This aircraft will have the ability to penetrate enemy defenses well into the 1990s and to serve as a more survivable and enduring cruise missile platform. The B-1B also will have a most important conventional role for many years to come. We also plan to deploy the ATB as soon as possible.

The "two bomber" approach of the Administration's program will not only provide increased capability when needed, but also will help in controlling costs by stimulating competition, allowing for flexible procurement policies, and providing the B-1 for use as a cruise missile carrier for the 1990s--instead of another, yet-to-be-developed aircraft.

Meanwhile, we will also modernize a selected portion of our newer B-52s to carry cruise missiles and make them more survivable overall. A force of about 3,800 air-launched cruise missiles will be deployed beginning next year. Finally, existing KC-135 aerial tankers will be retrofitted with new engines to increase our airborne refueling capabilities.

c. Sea-Based Forces

The cornerstone of our program for the sea-based strategic offensive forces is the development of the more accurate submarine-launched ballistic missile (SLBM) known as the D-5, or TRIDENT II missile. This missile, which we plan to deploy in 1989, has nearly doubled the payload of its predecessor, the C-4, and is more accurate as well. We thus will maintain our sea-based capabilities when large numbers of older POSEIDON submarines retire in the 1990s. At the same time, we provide the additional targeting capabilities that come with a more accurate missile. We plan to continue construction of the TRIDENT ballistic missile submarines at a steady rate of one per year. Since no TRIDENT submarine was authorized in FY 1982, we are requesting two in FY 1983 to maintain this steady level of production over the two year period.

In addition to the long term plans, we will deploy several hundred nuclear-armed sea-launched cruise missiles on our general purpose submarines beginning in 1984. These missiles will serve to strengthen our deterrent.

d. ICBM Forces

The quest for a satisfactory solution to the increasing vulnerability of our existing land-based ICBMs has been a particularly vexing one. The Reagan program provides a step-by-step modernization program for the ICBM force. We will continue development of the MX

missile--a far more accurate and more powerful missile than the MINUTEMAN. We will plan to deploy 100 operational MX missiles--each with 10 warheads--with a minimum of 40 in existing MINUTEMAN silos. All TITAN missiles will be deactivated. Deploying the MX in silos gives us a near-term improvement in our existing ICBM force, and an initial way of breaking the Soviet monopoly on prompt hard-target-counterforce capability until the D-5 and more permanent, less vulnerable MX deployments become operational.

Meanwhile, we will pursue research and development on three promising programs that would give us survivable MX basing modes for a much longer period. These are:

- deep basing to protect missiles and control systems, if feasible, even from direct hits by Soviet weapons.
- continuous airborne patrol aircraft, through development of a long-enduring aircraft that could carry and launch an MX missile; and
- ballistic missile defense to protect our land-based missiles from incoming Soviet missiles and thus improve the survivability of our missiles.

We expect to choose one or, more likely, several of these options in 1983, the accelerated schedule directed by the Congress.

e. Strategic Defense

Our strategic defenses have been virtually ignored for over a decade. As a result, we have large gaps in the North American air defense network and obsolete air defense interceptors. And research and development programs for anti-satellite and ballistic missile defenses have fallen behind Soviet efforts.

Our approach is multi-faceted. It will improve air surveillance, in coordination with Canada, by deploying a combination of new Over-the-Horizon BACKSCATTER radars and improved versions of existing radars. Meanwhile, efforts to develop more enduring sensors will be pursued. We will replace five squadrons of aging F-106 interceptors with new F-15s and buy additional AWACS aircraft for peacetime and wartime surveillance and interceptor control. We will continue to pursue an operational antisatellite system. And we are increasing the research and development effort on ballistic missile defense systems that could provide defense for our strategic forces.

Civil defense has also been neglected in past years. A new effort will be made to improve our civil defense system over the decade ahead.

6. Improving the Management of the Defense Department

Improvements in the management of the Defense Department and the resources for which it is responsible are essential if we are to obtain the best value for our defense dollars. The management initiatives Deputy Secretary Carlucci and I have taken have had five broad purposes:

- to provide for the best available contributions in strategic thinking, so as to renew defense policy and military strategy in order to adjust to the changed threat and take full advantage of our intellectual, scientific, and technological capabilities;
- to accomplish cost reductions wherever possible and make more efficient use of resources;
- to streamline the planning, programming, and budgeting system to eliminate wasteful paperwork and duplication of planning efforts, and to assign clear responsibility to the Services;
- to improve the acquisition of weapons systems, reducing costs and time delays by eliminating unnecessary regulations and permitting steadier long-term procurement, with stronger incentives for industry to develop more economical production processes; and
- to institute a vigorous effort to eliminate waste, fraud, and abuse throughout the Department and the Services.

a. Strategy and Policy Formulation

Defense policy and military strategy have to be renewed to adjust to the changed world environment, overcome obsolete concepts and thinking, and take full advantage of U.S. and allied capabilities. But the best strategic thinking will be of little use unless it can be translated into concrete policy decisions, budgetary choices, and specific strategic plans. We have, therefore, taken initiatives both to improve the translation of strategic thought into policy decisions and to encourage and utilize intellectual work that can inform and guide our decisions.

The new DoD planning process ensures that strategy and policy requirements are constantly before our budget officials and planners. By reorganizing the Defense Resources Board and streamlining the planning, programming, and budgeting system (see below), we provided the structure through which the renewal of strategic thought and policy can affect the actual operations and decisions of the Defense Department.

To develop the intellectual foundation for defense policy and strategy, we instituted more flexible and efficient ways of using established outside research organizations and have created a new group, the Strategic Concepts Development Center, located at the National Defense University. This Center will take advantage of the rich resources of the National War College and will provide advice to me, the Deputy Secretary of Defense, and the Chairman of the Joint Chiefs of Staff.

b. Cost Reductions

Significant reductions in Defense outlays have been made since our original plan in March to compensate for increases in non-Defense outlays, such as interest and unemployment insurance, and for lower revenues. Defense has taken reductions of \$33.9 billion from the March original five-year topline, FY 1982-86.

Identified savings and economies in budget authority total \$38.7 billion through FY 1986, compared with the previous Administration. If FY 1987 is included, the cumulative total is \$48.2 billion. In addition, we have targeted future savings of \$10.1 billion for FY 1984-87. This will bring the total savings and economies to almost \$60 billion. We have already reduced FY 1983 Defense outlays alone by more than \$5 billion based on new economies and efficiencies.

The constraints in effecting such savings must be properly understood. Ninety-three cents of each Defense outlay dollar are committed at the start of the year to cover prior year programs and minimal operations of the Department. This leaves only seven cents of each Defense outlay dollar for spending for new programs. Because of Defense spend-out patterns, outlay reductions require program reductions about four times as large. This causes serious program disruption and impacts heavily on faster spending readiness functions.

The following table summarizes the savings achieved or programmed.

TABLE II.C.2

Economies and Efficiencies
Preliminary Estimates
TOA (\$ Billions)

	<u>FY 81</u>	<u>FY 82</u>	<u>FY 83</u>	<u>FY 84</u>	<u>FY 85</u>	<u>FY 86</u>	<u>Sub- total</u>	<u>FY 87</u>	<u>Total</u>
Pay Adjustment	.1	2.1	4.0	5.1	5.9	6.5	23.7	7.1	30.8
Operations	.3	1.2	.9	1.0	1.0	1.0	5.4	1.0	6.4
Acquisition	<u>.1</u>	<u>1.1</u>	<u>1.6</u>	<u>1.9</u>	<u>1.9</u>	<u>3.0</u>	<u>9.6</u>	<u>1.4</u>	<u>11.0</u>
Subtotal	.5	4.4	6.5	8.0	8.8	10.5	38.7	9.5	48.2
Targeted Future Savings	<u>—</u>	<u>—</u>	<u>—</u>	<u>2.0</u>	<u>1.7</u>	<u>1.5</u>	<u>5.2</u>	<u>6.1</u>	<u>11.3</u>
Total	.5	4.4	6.5	10.0	10.5	12.0	43.9	15.6	59.5

Compensation savings reflect: (1) a cap on Civil Service pay increases at 5.0 percent compared to the unrestrained application of comparability surveys; (2) once a year cost-of-living increases in lieu of semiannual increases; and (3) reversal of military pay reforms proposed by the previous Administration that would have cost more in the near term in order to realize some economies in the long term.

The costs of our internal operations have been greatly reduced through elimination of unnecessary travel; reduced reliance on consultants and contract management services; reductions in base overhead; reduced purchases of unneeded equipment, supplies, and furniture; and capital investments that will increase productivity. These are the outcome of intensive reviews and hard-nosed budget scrubs that will continue.

Economies in acquisition reflect not only reductions and cancellations of marginally useful programs approved by the previous Administration, but also many of the Department's acquisition initiatives. For example, the acquisition savings shown above include over a billion dollars from increased multi-year procurement; nearly \$2 billion by rephasing procurement to take advantage of more economic order quantities; \$1.5 billion from procurement of lower cost systems; and several hundred million by investing in productivity enhancing capital equipment. In addition, many programs have been delayed so that they too can be financed at more economical rates at a later date.

In addition to our own initiatives, we have examined scores of suggestions and recommendations on ways to save Defense dollars that we have received from the General Accounting Office, the Congressional Budget Office, the House Republican Study Committee, various Congressional Task Forces, and individual members of Congress. Of course, many of these suggestions duplicate initiatives that we had already undertaken. Others have been incorporated into our management initiatives and budget.

c. The Acquisition of Weapons System

To improve the acquisition process, we stress long-range planning so that the Services, the Congress, and the contractors will know as far in advance as possible the full scope of each program. I have delegated greater responsibility and accountability to the program managers to reverse the tendency towards micro-management by the Department. In choosing weapons systems, we are making every effort to achieve more economical production rates. At the same time, we must make doing business with the Defense Department more predictable and attractive. If we discourage innovative and efficient contractors from bidding for and participating in defense business, we will not restore a healthy, strong industrial base for military orders. To this end, we also must use realistic cost, budget, and funding figures so that both we and the Congress understand early what the total cost of the full program will be.

d. The Planning, Programming, and Budgeting System (PPBS)

Within recent years, the PPBS has grown top-heavy and congested with paperwork and detail, leading to an overemphasis on programming and unneeded data, to the neglect of strategic planning and professional military advice. I initiated a comprehensive review of PPBS to ensure that our strategy will be in harmony with our military capabilities, and to streamline our decisionmaking process. Following careful study, from both within and outside the Department, we have now thoroughly revised the system.

The new approach enhances the participation of top officials in the Department and of Service line-managers and ensures that the military advice of the Joint Chiefs of Staff and the Commanders of the Unified and Specified Commands is fully considered.

We cut back by more than half the paperwork that was required for the PPBS process. Budget documentation has also been reduced and Congressional committees have been asked to reduce the paperwork requirements they have imposed. Furthermore, we emphasize centralized control of executive policy development but decentralized policy execution. My senior staff, the Joint Chiefs of Staff, and the Service Secretaries can now concentrate on major policy

decisions in offering me their advice and recommendations. The Services have been made responsible for the development and execution of the day-to-day management of the resources under their control. My staff also provides overall technical support and major mission analyses necessary to use the capabilities of all the Services and to meet the objectives identified by the President and Congress.

I have enlarged the Defense Resources Board, the principal governing body of the Department's program review process so that we can use the full capability of the Department to formulate policy and design programs. The Board now includes the Service Secretaries and makes available the views of the Commanders of the Unified and Specified Commands.

e. Eliminating Fraud, Waste, and Abuse

I have instituted a continuing audit, inspection, and evaluation process to eliminate waste and to discover fraud and abuse so that the Government may take proper legal action to recover any losses. I established a new senior position, the Assistant to the Secretary of Defense (Review and Oversight). This official is responsible for coordinating all activities within the Department concerned with the elimination of fraud, waste, and mismanagement. He monitors and evaluates program guidance to all DoD activities on matters regarding criminal investigation programs. He conducts criminal investigations, as required, in the Office of the Secretary of Defense, the Organization of the Joint Chiefs of Staff, and the Defense Agencies. And he monitors the adherence of DoD auditors to internal audit, contract audit, and internal review policies and procedures. We have also set up a telephone hotline to help detect fraud, waste, and mismanagement in DoD programs. This innovation has proven quite effective and has led to a great many calls, 85 percent of which have resulted in useful suggestions.

ASSESSMENTS AND PROSPECTS

A. ASSESSMENT OF THE GLOBAL MILITARY SITUATION

1. The Central Role of the U.S.-Soviet Military Balance

The Soviet Union poses a greater danger to the American people than any other foreign power in our history. Only the Soviet Union has the power to inflict tens of millions of casualties on our population. Only the Soviet Union has massive and modern conventional and nuclear forces deployed, directly confronting our friends and allies in Europe and Asia. Only the Soviet Union has the forces and geographic proximity to threaten the free world's major source of energy. And the Soviet Union is embarked on a sustained effort to encourage and arm totalitarian forces in various parts of the world, so as to expand its political influence and military reach.

The Reagan Administration also fully recognizes that there are other threats to world peace and to the security of the United States. For example, we and our allies have come to depend heavily for important resources on some parts of the world which are either hostile or turbulent, or both, and which may possess powerful modern weapons. The Administration is also mindful of the fact that nuclear proliferation may lead to new dangers in the future and that the spread of nuclear explosives must be discouraged and inhibited. Moreover, the United States, together with its allies and friends, has to deter and contain terrorist threats by entities that act independently of the Soviet Union.

But even the threats that may arise independently in various regions are affected by Soviet power. Moreover, the Soviets sometimes choose to stimulate local instabilities, and even where they do not, they may benefit from the opportunities that these instabilities offer. The possibility of Soviet intervention increases the risk for the United States as it strives to protect a regional ally against a regional foe. The diffusion of power among many unstable and sometimes antagonistic states does not lessen the Soviet threat; "multi-polarity" has not, as many had hoped, become a benign force in the world. In key respects, unfortunately, the many dangers reinforce each other and make it more difficult to meet any one.

We recognize that several important foreign policy and military problems are not the result of any Soviet initiative. But this recognition must not divert us from the fact that it is the Soviet military effort, its direction and its nature, that drives our defense budget. When it comes to planning our military forces and defense strategy, it is clear that Soviet capabilities--present and potential--must be the dominant consideration.

For a realistic assessment of the threat we face, I refer you to the recent DoD publication, Soviet Military Power, a copy of which is attached to this Report. I published this document in an unclassified version to enhance public understanding of the Soviet armed forces--their capabilities and their strengths. There is nothing

hypothetical about Soviet military power--it is real; and it is the single greatest threat to the United States and the Free World.

The touchstone for determining the adequacy of U.S. and allied defense plans and programs is whether these programs would put us in a position to defeat attacks on ourselves or essential allied interests wherever these interests are forcibly challenged. We have to be concerned with the potential courses and consequences of a variety of plausible conflicts that may threaten our interests or those of our allies. The array of existing forces that we inherited from past military programs, and the forces on the side of our potential enemies are clearly the major determinants of the outcomes of such conflicts in the near future. However, any direct comparison of specific forces can be only a gross indicator of the challenge that we now confront.

Some of these gross indicators, nevertheless, deserve our attention. To appreciate the overall trends in military strength, we can begin by comparing estimates of the overall military programs for the Soviet Union and the United States. This allows a crude first approximation of the evolution of the U.S.-Soviet military balance.

During the first two decades after World War II the United States made a larger military effort than the Soviet Union, (Chart I.A.1). Beginning in the 1960s, however, the Soviet Union steadily enlarged its military effort and then surpassed the U.S. defense program, which fluctuated but showed no real growth. For the last five years, the Soviet Union's military program has been about 50 percent larger than our own.

This comparison measures the size of the Soviet effort by an estimate of what it would cost, in dollars, for the United States to acquire and operate the Soviet military force as the Soviets do. The dollar estimates for the Soviet Union do not show how much the Soviets actually spend--they are estimates of the forces they are acquiring, stated in terms that permit comparison with the U.S. defense program. This comparison, however, does not include some very significant Soviet efforts and for which there is no exact U.S. counterpart--for example, their extensive preparations for industrial mobilization.

2. Trends in United States and Soviet Military Investment

More revealing than comparisons of total military expenditures is a comparison of American and Soviet military investment. While operating, maintenance, and personnel costs reflect military capability at the time they are incurred, programs for procurement of weapons, military construction, and research and development are investments in future capability.

In addition to the intrinsic importance of military investment, a comparison of Soviet and American investments is relatively clear-cut. There are many asymmetries between the two sides' defense programs, and between the two sides' economies, which make a comparison difficult. The U.S. has made certain choices about how to recruit, compensate, retain, and train its forces, and those choices impose some costs which the Soviet Union does not pay when it conscripts most of its forces for two years and pays them even less than the Soviet civilian standard of living. On the other hand, Soviet industrial inefficiencies make it relatively more costly for them to produce weapons than it is for us to produce weapons. While the dollar-cost comparison of the two programs attempts to correct for these asymmetries (by measuring both programs by what they would cost in the U.S.), a comparison of military investments focuses on items which are more similar for the two sides.

Military investments are also a particularly meaningful yardstick because they focus on the cumulative growth in strength. Military investments build up a "capital stock" of equipment, facilities, and weapon designs. Such assets last for many years and cannot be quickly acquired in an emergency. Future Soviet and American military capabilities will be decisively shaped by the inheritance from past and present military investment.

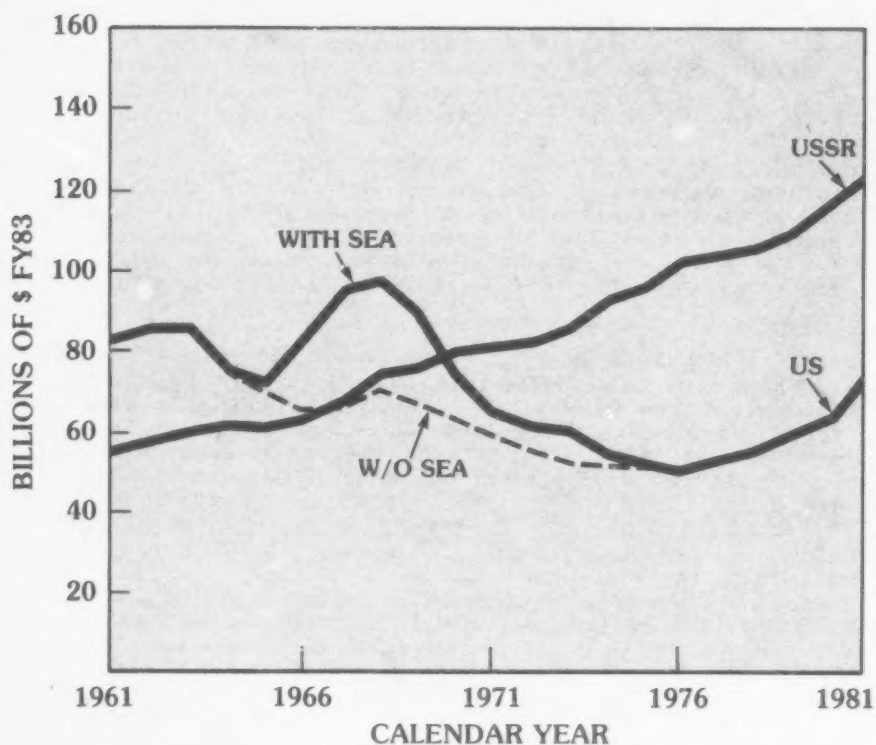
The Soviet Union's military investments have exceeded our own even more markedly than has its total defense program--an excess ranging from 80 to 90 percent during the past five years (Chart II.A.1). Investments form a larger share of a larger Soviet program; the Soviet commitment to military investment has not been deterred by the relatively high ruble cost of those investments; while the United State's resources for military investment may have been constrained by the relatively high dollar cost of paying our personnel and operating our forces.

The most direct result of these larger investment programs is an overall asymmetry in the flows of new weapons to military forces across virtually all of the major mission areas. Moreover, we have identified some 50 new or modified aircraft, missiles, naval ships, and space systems currently in flight testing or trials.

This continued high level of Soviet military investment has created an impressive inventory of military assets. A simple way to compare the U.S. and Soviet assets which have resulted is to assume that investments contribute an undepreciated "book value" to a nation's military capability over an average lifetime of, say, 20 years. In the 1960s, U.S. military investments were larger than the Soviets' and many of the assets then acquired still contribute to our strength. Hence, the Soviet advantage in accumulated assets began later and is currently smaller than their advantage in investments. But the very longevity of military assets means that the Soviet lead will grow wider, even if we now accelerate our own investment efforts. That is to say, we have not yet experienced the full consequences of our lagging investments of the 1970s.

CHART II.A.1

**COMPARISON OF US MILITARY
INVESTMENT OUTLAYS WITH ESTIMATED
DOLLAR COST OF SOVIET MILITARY
INVESTMENT ACTIVITIES**



NOTES:

INVESTMENT INCLUDES RDT&E, PROCUREMENT AND MILITARY
CONSTRUCTION

Chart II.A.2 shows that, under these rather simplified assumptions, even an increase in U.S. investments as high as 14 percent per year would not close the gap in accumulated assets until the early 1990s. The gap could be closed more quickly if U.S. investments provided qualitative innovations that increase the rate of obsolescence of past Soviet investments. This point highlights the importance of research and development and of policies to protect our technological lead. Technology transfer from the West to the Soviet bloc, in effect, increases our defense burden.

It is often argued that to compare only the United States and Soviet military programs is misleading and that adding the programs of allies will change the comparison in our favor. Any apparent edge of the Western Alliance, however, is overshadowed by the more meaningful comparison of military investment, and also fails to reflect the structural differences of the two sides. The military investment programs of the Warsaw Pact have exceeded those of the Atlantic Alliance plus Japan since 1973; they are currently about 15 to 20 percent larger (Chart II.A.3). Thus, the Warsaw Pact has been steadily accumulating more military assets than the Western Alliance for almost 10 years.

The structural differences of the two sides make the programs on the Western side add up less effectively than those of the Warsaw Pact. NATO is seeking to make its national programs more complementary. But in an Alliance of independent nations, duplication, lack of interoperability, and inability to achieve certain economies of scale cannot be avoided. For the Soviet bloc, military programs are more fully additive since the Soviet Union can impose standardization on the Warsaw Pact. Moreover the Soviets depend less on alliance unity than we because their partners contribute much less to the Soviet bloc's aggregate power than our allies contribute to NATO. Thus, the Warsaw Pact's advantage in effective investment is closer to 35 to 40 percent if, as a rough first approximation, the efforts of U.S. allies are considered 60 percent additive to U.S. efforts, while Soviet satellite efforts are 90 percent additive to Soviet efforts.

Some have suggested that the military programs of the People's Republic of China add to aggregate Western strength. The Soviet Union probably has plans for fighting on two fronts, so any "addition" of China's assets to those of the Free World may reflect the Soviets' own present assessment for certain contingencies. However, for other contingencies, Soviet planners might calculate that they could redeploy part of their forces—currently positioned against China to some other front.

3. The Nuclear Balance

In assessments of the global military balance, the greatest attention has been devoted to the U.S.-Soviet relationship in strategic nuclear forces, and for sound reasons. But this attention has assumed a particularly

CHART II.A.2

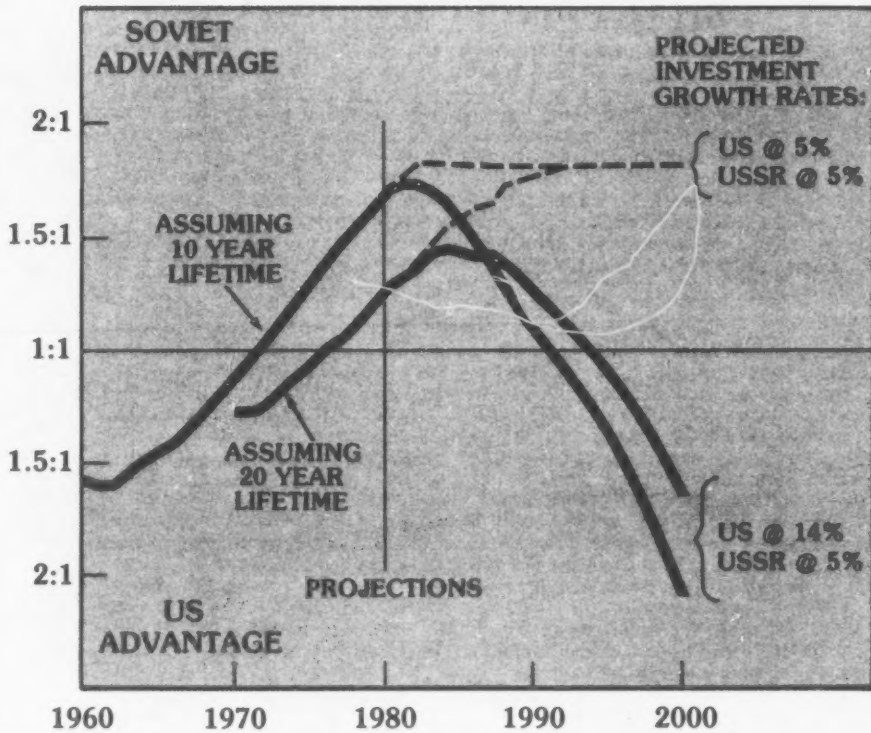
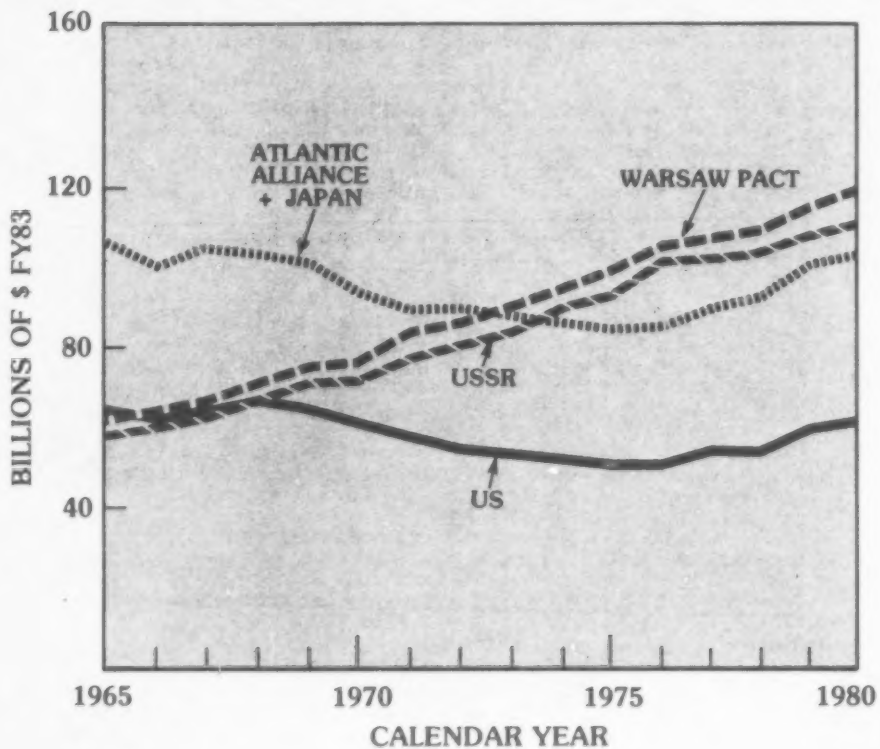
RATIO OF ACCUMULATED MILITARY INVESTMENTS

CHART II.A.3

**COMPARISON OF ESTIMATED ATLANTIC
ALLIANCE + JAPAN MILITARY
INVESTMENT OUTLAYS WITH ESTIMATED
DOLLAR COSTS OF WARSAW PACT
MILITARY INVESTMENT ACTIVITIES**



NOTES:

INVESTMENT INCLUDES RDT&E, PROCUREMENT AND MILITARY CONSTRUCTION.

U.S. TOTAL EXCLUDES VIETNAM INVESTMENT.

NON-U.S. ATLANTIC ALLIANCE DATA DERIVED FROM NONPERSONNEL DEFENSE OUTLAYS CONVERTED TO DOLLARS USING CONSTANT EXCHANGE RATES.

narrow focus during recent years when specific SALT negotiations became a dominant consideration for our strategic force policy.

The relationship between United States and Soviet nuclear forces is far more complex than is apparent in the picture derived from a set of SALT criteria. For one example, SALT criteria were blind to command and control systems. Yet, survivable and enduring command, control and communications systems are decisive for deterrence and would be a critical force capability should deterrence fail. SALT did not--and probably could not--deal with these systems. For another example, SALT limited "launchers" (a tenuously defined part of a weapon system), rather than the actual number of missiles and warheads themselves. Launchers by themselves are not adequate as a unit of limitation in Arms Control.

The point here is not that SALT was too limited in focus and scope. Most arms control negotiations, by necessity, can cope with only a fraction of the important features affecting an arms balance. The point is that the focus on those criteria of the strategic relationship that were within the purview of SALT is far too narrow for making those strategic decisions which significantly affect national security.

A major reappraisal of our methods of assessing the strategic nuclear balance has been underway in the Defense Department and is being emphasized with my support. It includes efforts to take account of Soviet-style assessments of the roles and performance of strategic nuclear forces and to evaluate Soviet perceptions of a wider set of contingencies. These range from crisis, local war, and escalation to intercontinental nuclear attacks, to Soviet views on continued nuclear warfare after large-scale attacks.

Since the objective of deterrent forces is to influence Soviet views and decisions, we must pay careful attention to how the Soviets might see the role of nuclear forces. What are their measures of effectiveness? What would be their criteria of success?

There are many reasons to believe that Soviet assessments are likely to be different from those usually made in the United States. United States assessments have focused on dealing with the "out-of-the-blue" surprise attack and on the associated problem of ensuring the survival of our long-range nuclear forces. Soviet assessments, by contrast, may focus on outcomes of large-scale, global war in which both conventional and theater nuclear forces are also involved.

The broader picture of what has been happening to the nuclear balance becomes clearer as we look at a wide variety of measurements of the U.S.-Soviet nuclear relationship. No single measure or combination of these adequately

describes the balance; however, when taken together we see a long downward trend in the US position since the mid-1960s. Even considering dynamic analyses which attempt to capture more of the realities of conflict, the trends are similar. There are many other dimensions of the balance that need to be included in an overall assessment.

While the Soviets have emphasized both offensive and defensive forces, the US has largely neglected defensive preparations. The Soviets have also continued development of and paid increasing attention to civil defense and a wide variety of measures, designed to enhance the prospect of survival of key elements of their society after the outbreak of a nuclear war.

Soviet programs to protect their command, control, and communications systems, furthermore, have been much more substantial than ours. They have made a much broader effort to protect leadership on a continuing basis. In addition, they have hardened communications facilities and continue to pursue efforts to enhance their ability to attack our C³ systems, including an aggressive, anti-satellite program.

While our strategic programs have been restrained because of expectations for SALT and detente, the Soviets continually improved the quality of their strategic forces. Given the central importance of these systems to national security, the Reagan program places major emphasis on reversing the trends of the past decade and strengthening our strategic forces.

It has been customary for our assessments of the nuclear balance to draw a rather sharp line between "strategic" nuclear forces on the one hand and the remainder of the nuclear forces on the other. This dividing line was a necessary device to circumscribe the systems to be included in SALT.

Apart from the exigencies of SALT, the distinction between "strategic" and "non-strategic" nuclear forces had important historic origins and reflected differences in the missions and geographic location of these forces. However, the distinction has become blurred by the realities of Soviet military doctrine and capabilities. The vulnerability of our theater forces to enemy attack interacts closely with the vulnerability of our strategic forces, especially in the vital dimension of command and control. And Soviet doctrine seems to categorize nuclear forces differently, by regarding their other nuclear forces and ours as essentially an extension of intercontinental nuclear forces.

During the late 1950s and early 1960s, both sides made plans for the development of a family of nuclear-capable artillery and surface-to-surface missile systems.

The U.S. program, however, has not been implemented and currently centers on the PERSHING II missile and Ground-Launched Cruise Missile. Until the replacement of these systems, the West is left primarily dependent on a combination of artillery, LANCE missiles, and tactical aircraft. By contrast, the Soviets stuck close to their long-term plans. With deployment of new SS-21, SS-22, and SS-23 missiles, in combination with modernized artillery and aircraft, they have apparently achieved their original goal of providing for a significant range of complementary artillery, missile, and aircraft systems, each with nuclear, chemical, and conventional ordnance options.

If NATO targets alone are considered, the totality of the improvements in Soviet surface-to-surface missile capabilities appears to have significant implications beyond tactical missions. Soviet range and accuracy improvements significantly enhance the Soviets' ability to support an unreinforced attack because the new systems can launch from peacetime locations, supported by a relatively unstressed logistics system.

In assessing tactical and theater nuclear forces, we must take into account launchers and their survivability and reaction time as well as the nuclear ammunition stockpile. The count of available launchers limits the size of any one salvo but not the scope of the total nuclear attack over a period of time. Soviet mobile missiles give an edge in survivability vis-a-vis fixed NATO TNF installations. Since the Soviets provide for the reload of nuclear missiles (as well as artillery), we have to consider the total number of warheads, not just the number of launchers.

We must recognize the global threat to our interests posed by the overall asymmetry in the types of nuclear warheads and the comprehensive coverage and operational characteristics of Soviet nuclear systems. In East Asia and the Pacific, as well as on the Western front, the Soviets continue to add SS-20s to their formidable and growing arsenal of nuclear-capable aircraft, nuclear submarines, and other platforms. Much of this capability could be quickly shifted or retargeted to be concentrated against any potential theater of conflict.

4. Maritime Forces and Power Projection

We are determined to restore and maintain maritime superiority over the Soviets. The question of the use of naval forces by the United States or its adversaries to protect or further their interests is closely related to the more general question of the ability of each side to project power in various areas of the world. Today, we have critical interests in many places that are distant from the Continental United States. These places include not only two of the 50 States and the Commonwealth of Puerto Rico, but also the homelands of our European and Asian allies and regions--notably the Persian Gulf--on which we and our allies critically depend.

The United States has long recognized that it has essential distant interests. During the 1970s, however, we tended to narrow the range of our concerns to the center of Western Europe and to neglect the fact that, for the European center as well as for ourselves, other parts of the world are vital. In fact, Western Europe, our Asian allies, and the United States have sharply increased their dependence on raw materials from other parts of the world at the very time that these areas have become increasingly vulnerable to hostile actions.

Soviet naval policy and programs for the 1980s are expected to be directed toward broadening the range of military and political options available to the leadership across the entire spectrum of conflict.

In comparing maritime forces particularly, one must keep in mind the major asymmetries in roles and missions of US and Soviet naval forces including long range land-based aircraft. It is, therefore, inadequate to assess the "naval balance" by simple comparisons of U.S. and Soviet forces in terms of tonnage, numbers of ships, or types of ships.

United States territory is partly located overseas and the United States can reach most of its allies only by crossing wide oceans. The Soviet Union has no parallel requirements. In the 1950s, Soviet naval forces were developed for coastal defense and interdiction of America's links with its allies. In the 1960s, the Soviets began to build strategic nuclear submarines which have now become a major element of their strategic forces. Only more recently has the Soviet Union begun to develop naval capabilities to conduct open-ocean, anti-submarine warfare, and, on a smaller scale, amphibious operations overseas.

Apart from this fundamental asymmetry between U.S. and Soviet maritime requirements, a comparison of naval forces is further complicated by the important roles of other maritime assets, such as merchant shipping, and land based forces. Thus, our capabilities and requirements must be considered region by region because of the influence of base structures, land-based air forces, and other factors. Moreover, the Soviets approach naval warfare differently from the United States and our allies. For example, to attack surface ships they emphasize cruise missiles more than the United States and our allied navies do--both conventional and nuclear cruise missiles that can be launched from long-range aircraft, submarines, and some surface combatants.

The Soviets have invested heavily in technologically advanced platforms, sensors, and weapons for submarine and anti-submarine warfare. Many features of these forces, taken together with our observations of Soviet naval exercises, indicate that their concept of operation calls for Soviet anti-submarine warfare forces to be concentrated in home waters in support of newer classes of Soviet ballistic

missile submarines. In contrast, our anti-submarine forces would be spread worldwide, protecting vital sea lanes and naval surface ships from the very large Soviet attack submarine force. That force is steadily improving in quality, as the Soviets deploy increasing numbers of new types of submarines (ALPHA-class SSN and the new OSCAR-class SSGN) armed with new supersonic cruise missiles of sufficient range to permit attacks on our ships from over the horizon, and beyond the sonar detection range of our escorts.

The Soviets have also undertaken a steady buildup of their land-based naval aviation, using the BACKFIRE aircraft and other land-based medium- and long-range bombers. The central location of the Soviet Union on the Eurasian landmass permits rapid redeployment of long-range bomber forces. This provides a formidable capability to concentrate attacks on surface ships over broad sea areas around the Soviet homeland and, indeed, around much of the Eurasian landmass.

U.S. and allied maritime forces continue to be structured around surface-ship and submarine task forces or battle groups, with aircraft carriers as the focus of power in the battle groups. The United States responded to the threat of Soviet bombers by procuring advanced fighter-interceptor aircraft (e.g., the F-14 with PHOENIX missiles) because fighters are the only direct threat to long-range bombers, such as BACKFIRE, that can launch cruise missiles at ranges beyond the range capabilities of surface ship anti-air warfare systems. Western navies have also introduced new surface-to-air missiles, radar, and communication equipment, as well as cruise missiles of our own to threaten Soviet surface ships when close to allied task groups.

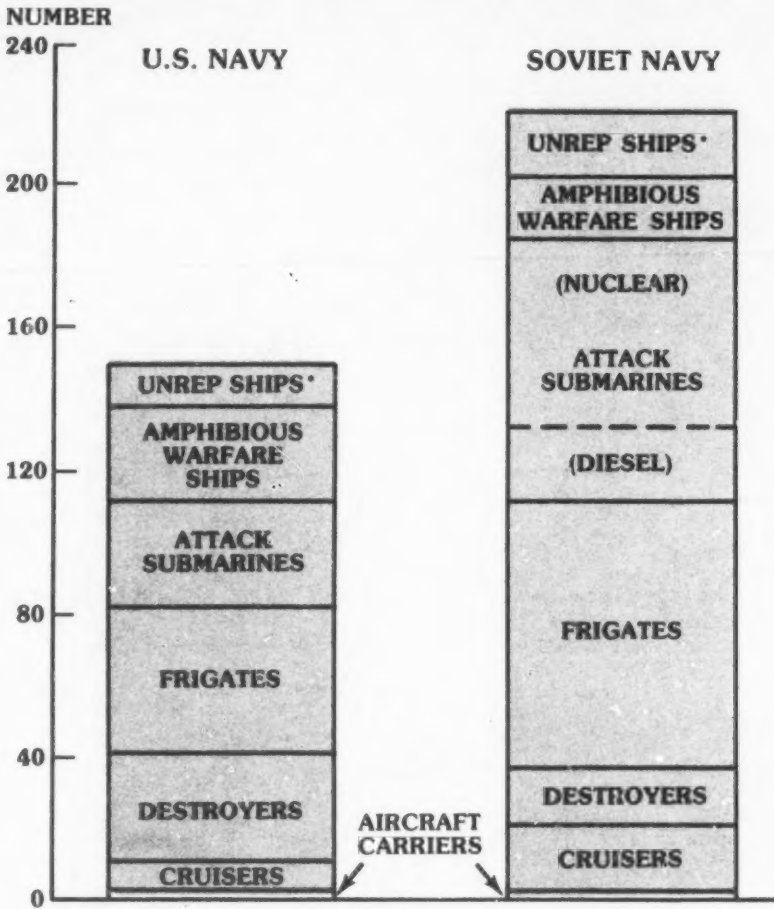
Despite these improvements, the pace of U.S. development and procurement has lagged behind the rate at which the Soviets have introduced new systems into their maritime forces (Chart II.A.4). This lag, coupled with our failure to replace aging units on a one-for-one basis, has dangerously eliminated the margin of maritime superiority on which the United States and its allies have depended since the end of World War II.

Recently, we have had evidence of a shift by the Soviets toward ship designs that permit sustained power projection operations in distant waters (e.g., the KIEV-class carriers, a new class of amphibious assault ship, and four new classes of cruisers and destroyers).

Judgments on our capabilities in the Persian Gulf region are heavily dependent on assumptions about such factors as tactical warning, Rules of Engagement at the commencement of hostilities, and unopposed overflights of third countries by Soviet bombers. In other ocean areas, particularly those outside the range of missile-equipped Soviet aircraft, our naval position remains strong enough so that our forces could accomplish their assigned missions.

CHART II.A.4

OPEN OCEAN GENERAL PURPOSE SHIPS AGE 10 YEARS OR LESS (END OF FY 80)



*UNDERWAY REPLENISHMENT SHIPS

Directly related to maritime forces and the changing character of navies is the balance between U.S. and Soviet capabilities to project power into crisis areas around the world. The United States has essential interests in defending allies who are close to the Soviet Union and separated from the Continental United States by the Atlantic and Pacific Oceans. No simple comparison of the size of our navy with the Soviet Union's will reveal whether we have the power to keep open the sea lines of communication to a threatened ally along their entire length, or whether, on the contrary, an adversary can cut them at some key point. Similarly, simply matching ground forces on both sides does not take into account the fact that in peacetime a large proportion of our ground forces is based many thousands of miles away from an area of conflict in the center of Europe.

Since the beginning of the 1970s, we have observed the Soviets describe the missions of their military forces as not only the traditional protection of the Soviet Union, but also the protection of "Socialist states" throughout the world. The push to achieve long-range projection forces points to a major qualitative change in Soviet forces and strategy. The Soviets are acquiring forces for, and operational experience in, the projection of power and influence at great distances from the Soviet Union.

Assessment of relative power projection capabilities must include several additional factors which go beyond military forces and equipment. Effective power projection is facilitated by treaties of alliance and friendship, overseas military presence, rights of passage and overflight, base, port, and other facility use agreements, the willingness of friends to cooperate, and correct perceptions of the U.S. resolve to protect its interests. All of these will vary depending on circumstance and geographic region. In addition to using a variety of military and non-military tools to project power, the Soviets have a highly centralized and authoritative apparatus to coordinate the application of their activities directed toward basic goals. This apparatus is centered in the International Department of the Communist Party Central Committee.

Soviet ability to project power has been increasing relative to ours. They have expanded and improved their peripheral ground troops, tactical aircraft, and air defense units. They have improved their air and sealift capability and logistics infrastructure around the Soviet periphery. And, as we have seen, they have developed naval capabilities that allow them to project and support forces at a sizeable distance. They have improved their capabilities to manage distant operations by establishing sophisticated long-haul command, control, and communications facilities in such key areas as Cuba, Yemen, and Vietnam. They continue to use diplomacy, subversion, and military pressure to undermine non-communist states and to secure bases in Southwest Asia, Africa, and the Caribbean Basin.

In contrast, U.S. and allied access to several regions of strategic importance has declined as our overseas basing structure and that of our allies has diminished from

what it was 20 years ago. To mention only two out of many examples, Aden, which used to be under British control, is now essentially a Soviet base, as is Cam Rahn Bay in Vietnam. And traditional friends may, in some cases, be less willing to cooperate with us militarily.

We have arranged for increased funding for facilities in East Africa and Southwest Asia because of our concern for the security of the Middle East and Persian Gulf region. U.S. long-range airlift capabilities will be improving, but Soviet proximity to the Persian Gulf and continuing Soviet force improvements clearly give the Soviets an advantage in projecting power into that vital region.

As we shift the focus away from the Soviet area of advantage on the Eurasian continent and its periphery to a broader area, the United States maintains a decided advantage in the ability to project power. However, the Soviets are strengthening their worldwide position by actively pursuing a much broader strategy involving aid, military advisers, military assistance, and use of proxy forces to increase their political influence, obtain communications, base, and facility use, and permit and enhance worldwide Soviet military operations. We can expect to see the character of Soviet forces continue to change considerably during this decade to accommodate their increased interest in power projection.

5. Conventional Forces in Europe

NATO's primary objective is to deter Warsaw Pact aggression and, if necessary, to defend against any attack on its territory or interests. In addition to deterring overt aggression, a strong NATO defense posture is needed both to limit the effectiveness of Soviet military forces as an instrument of political coercion and to foster stability in Europe. NATO's "flexible response" strategy requires mutually reinforcing strategic nuclear, theater nuclear, and conventional military forces that can respond effectively to any level of attack. Meeting these objectives will require that NATO continue to strengthen its theater nuclear and conventional forces.

The Warsaw Pact's buildup of conventional forces has attracted less public attention than the Soviet nuclear buildup, but it poses a serious threat to NATO's security--precisely because the Atlantic Alliance has lost its compensating advantage in nuclear arms. The combat power of the Warsaw Pact has increased considerably over the last 10 years, although force levels have remained roughly constant over this period--substantially larger than NATO's forces in many key areas, particularly ground combat forces. The Soviet advantage in associated weaponry has increased over the period. The Pact could quickly mass more than 150 divisions opposite NATO's Center, Northern, and Southern Region, and more than 5,000 tactical aircraft in direct support of these large ground formations. Moreover, most Pact forces have been modernized significantly with new weapons and support equipment.

Relative ground force potential in the Central Region has grown more favorable to the PACT over the past 15 years.

Air combat capabilities, calculated in a manner similar to ground force comparisons, for both NATO and the PACT have also grown steadily between 1965 and 1980. The Pact had an overall advantage in deployed combat aircraft. NATO modernization trends have resulted in about a 64 percent improvement in aircraft combat potential for deployed forces, compared to over 70 percent improvement for the PACT.

Not only have PACT land forces been impressively modernized, they have also been undergoing a reorganization to provide both a better combined arms fighting capability and greater sustainability.

The net result has been the emergence of Warsaw Pact ground and tactical air forces that are much stronger and better prepared to sustain conventional combat. NATO has traditionally sought to offset the Warsaw Pact's numerical advantages with higher quality equipment. However, the Soviet modernization of armaments has diminished, and in many cases reversed, NATO's qualitative edge. The qualitative advantage we had hoped to achieve by fielding the M-1 tank may be offset by continuing improvements in current Soviet tanks and by the expected fielding of the Soviet T-80 tank. Also, NATO's qualitative edge in air forces has been diminishing. Perhaps most important, Pact forces are becoming even better aligned with their military doctrine of defeating NATO quickly and decisively by means of fast-moving, "blitzkrieg-style" offensive operations. This mutually supportive relationship between doctrine and force structure means that Pact forces today pose a much more serious conventional military threat to NATO than was the case 10 years ago.

The combination of improving quality and a widening lead in numbers of major systems gives the Soviets a growing advantage in overall operational capability. In addition, the Warsaw Pact forces have gained in military strength through reinforcement actions, continued growth in war reserve equipment, and supply inventories contributing significantly to combat and logistic support capability. Thus, in contrast to the situation prevailing as recently as a few years ago, the Warsaw Pact appears increasingly capable of waging conventional campaigns in Europe lasting many weeks.

In order to insure deterrence against this formidable threat, NATO's military strategy calls for a strong forward defense effort by our combined ground and tactical air forces. Although substantial progress has been made in strengthening NATO'S forces, the Alliance's posture today has numerous weaknesses that erode its capability for executing this strategy. As a result, the quality of NATO's deterrent posture has weakened in recent years, and an accelerated U.S. and allied force improvement effort is needed if NATO is to retain a viable initial defense capability during the 1980s.

6. Southwest Asia and Africa

Recent events have dramatically increased the Soviet Union's access to the Persian Gulf region. The revolution in Iran eliminated a government whose military power posed a significant obstacle and substituted chaotic conditions that might facilitate the intrusion of a Soviet military presence. In addition, the Soviet Union and its proxies have established a major military presence in South Yemen and Ethiopia and increased the degree of control they exert over the regimes in these countries. The invasion of Afghanistan, despite the very real military difficulties of the Soviet occupation forces, has moved the potential Soviet front line further toward the Gulf. Compared to the 1960s, the Soviets can make use of heavy transport aircraft over Southwest Asia to support regional presence and client states. Furthermore, a large increase has taken place in the Soviet forces located in the nearby Caucasus and Turkestan Military Districts.

While these adverse changes were occurring in the Persian Gulf region, Africa increasingly became the target of subversion by the Soviets and their surrogates. Seizing opportunities for involvement in all corners of the African Continent, Soviet, East European, and Cuban military personnel and technicians have installed themselves in Ethiopia, Libya, Angola, Algeria, Mozambique and more than 20 other African countries. Of particular concern is the growing Libyan intervention and the Soviet-Cuban presence in the Horn of Africa (Table II.A.1).

TABLE II.A.1

Soviet Bloc Military and Civilian Advisors in the Mid-East and Africa (Significant Presence)

	<u>Soviet</u>	<u>Cuban</u>	<u>East German</u>
<u>Mid-East and North Africa</u>			
Algeria	8,500	170	250
Iraq	8,000	2,200	160
Libya	2,300	3,000	--
North Yemen	475	--	5
South Yemen	2,500	800	325
Syria	4,000	5	210
<u>Sub-Saharan Africa</u>			
Angola	700	18,000	450
Congo	850	950	15
Ethiopia	2,400	5,900	550
Guinea	375	280	125
Madagascar	370	55	--
Mali	635	--	20
Mozambique	500	1,000	100
Tanzania	300	95	15

Given the size of Soviet forces in the vicinity of the Persian Gulf, successful defense depends upon early arrival of U.S. forces--indeed upon their being in place in favorable defensive positions before any major Soviet penetration is achieved.

The United States has been attempting to enhance its own presence and operating capabilities in the region, in cooperation with such countries as Egypt, Oman, Kenya, and Somalia. This effort has included agreements on U.S. access in case of need and joint training exercises in the region.

7. East Asia

East Asia and the Pacific form, for the U.S., its western security region and, for the USSR, a separate theater of war with many contrasts to the military confrontation in Europe. In this large region, the interests and capabilities of four great powers converge.

The heightened Soviet effort to increase and project power in the Pacific, greatly facilitated by ever expanding Soviet access to air and naval facilities within Vietnam, is juxtaposed to traditional US interests and commitments in the region, the security concerns of the People's Republic of China, with who the United States has many common interests and objectives, and awakening Japanese awareness of their security interests and vulnerabilities.

The region is beset with internal conflicts, each with their own dynamics. The greatest and most militarized rivalry is the Sino-Soviet confrontation. Soviet forces in the Far East and Pacific have been increased and modernized since the mid-1960s, posing a threat to the world's most populous communist state, the People's Republic of China. North Korea has almost doubled its military capabilities since the late-1960s, raising tensions on the Korean peninsula. The Republic of Korea's steady force improvements, strong economic development, and the presence of U.S. forces have effectively deterred aggression. Following the "oil shocks" and the perceived decline in the relative U.S. strategic strength the Japanese are actively examining measures for a greater protection of their homeland and access of supply and markets.

Force trends in the Pacific region are unfavorable to the United States, Japan, and China. The Soviet Far East ground manpower has increased three to four times since the mid-1960s while that of the US in the Pacific has declined. Soviet tactical air forces and long-range air forces have been modernized. Vietnam is supporting its occupational forces in Kampuchea and Laos with increased Soviet aid. The Soviet Pacific Fleet has improved its power and reach with an aircraft carrier and other modern combatant ships. Sea surveillance and anti-submarine warfare operations based in Vietnam and the Soviet naval presence in the Indian Ocean have increased substantially. Chinese forces, large but ill-equipped, appear to need modern arms to counter the steady Soviet military buildup.

North Korea has relentlessly modernized and expanded its military forces. Much of this combat power is deployed well forward. The construction of hardened air, naval, and military facilities near the demilitarized zone, the North Korean tunnels under the DMZ, and heavy emphasis on unconventional warfare forces gives the North, which has the capability to attack with little or no warning, a military advantage. The Republic of Korea has enjoyed strong economic growth, much of which has been allocated to the improvement of the quality of life of its people. However, the South has not matched the military build-up of the Kim Il-sung dictatorship in the north.

U.S. naval forces in the Pacific, because of expanded commitments in other regions such as Southwest Asia, have been reduced to a post-World War II low. Our warships and submarines in the Pacific are about half of the 1965 level. The nuclear balance in the region has also shifted in favor of the Soviet Union.

The relative stability in the region reflects the vigor of our friends and the strength of our alliances. In order to strengthen these alliances, we hope that the Japanese, with the free world's second largest economy and eighth largest defense budget, will increase their contribution to regional stability by augmenting economic assistance to other nations, strengthening their air and sea defenses, and providing protection to the sea lines of communication out to 1,000 miles.

In Korea, we have emphasized the retention and modernization of our forces as well as continuing Republic of Korea modernization. As the Republic of Korea's economic recovery accelerates, their ability to finance the major force improvements they have planned over the next five years will grow. We hope that by 1990, a favorable military balance will be restored on the peninsula.

The role we assume in the military modernization of the People's Republic of China could be of enormous importance for China's own security. Certain arms sales and technology transfers, carefully managed in terms of our long-term strategic interests and relevant to China's perceived needs, might help strengthen China's value in countering Soviet expansionism in East Asia. A measured contribution to China's modernization can help to strengthen Beijing's perception of our reliability. It can also help prevent a widening of the gap between Chinese and Soviet military capabilities, thus contributing to the deterrence of a Soviet attack.

8. Western Hemisphere

For a century and a half, the Western Hemisphere has been protected from the reach of outside imperial powers, at first through the application of the Monroe Doctrine, and later through the collective security efforts of the American Republics. The West European empires, against which the Monroe Doctrine had been designed, have long since been dissolved. Today, it is the Soviet empire that poses the challenge to this hemisphere by intruding

with military and political means wherever the opportunity arises.

Castro's Cuba has abandoned the attempt to become a model of progress and has become one more instrument of Soviet imperialism, as well as a direct military threat to the region. It serves as an arms depot, a supplier of expeditionary forces for Soviet arms, and a logistics base for Soviet-supported intervention in Central America and elsewhere.

The Soviet Union has provided a high level of military assistance to Cuba. The total value of Soviet arms shipments to Cuba since 1960 is about \$2.5 billion. Since Cuban intervention in Angola, the yearly arms shipments have almost doubled on the average. During 1981, Cuba received 63,000 metric tons of arms--the highest yearly total since the massive buildup in 1962, the year of the missile crisis.

Cuba's military personnel strength has increased and its military capabilities have improved dramatically over the last five years. Of particular significance has been the development of an effective ready reserve which gives Castro and his Soviet masters a well-trained, and to a large extent, battle-trying mercenary force that can be activated on short notice. About 70 percent of Cuba's forces in Angola and Ethiopia are manned by ready reservists recalled to active duty. Cuban armed forces include an army of over 225,000, a navy of about 11,000, and air and air defense forces of 16,000. These figures do not include hundreds of thousands in paramilitary forces that, in many instances, are better trained and equipped than the regular armed forces of other Caribbean countries.

The Cuban army includes 9 active and 18 reserve divisions. The Cubans have over 200 MIG fighter aircraft, 650 tanks, 90 helicopters, 2 FOXTROT attack submarines, 1 KONI-class frigate, and about 50 torpedo and missile attack boats.

Cuba has over 2.3 percent of its population in the regular armed forces. In fact, one of every 20 Cubans participates in some kind of military or police mission. By comparison, Mexico, with seven times Cuba's population, maintains regular defense forces half the size of Cuba's and has less than two-tenths of one percent of its people in the regular armed forces. And, in the United States, we have less than one percent of our people in the regular armed forces. Per capita, Fidel Castro maintains about a 10 to 20 times larger military effort than any of the other major nations in this hemisphere.

Cuba's neighbors in Central America (with the exception of Nicaragua) maintain small defense forces, varying from almost none for Costa Rica to about 8,000 to 10,000 for Panama, 15,000 to 16,000 for Honduras and Guatemala, and about 20,000 for El Salvador. El Salvador, of course, has been compelled to expend its armed forces because of the totalitarian aggression against it.

The Soviet influence in Cuba is all-pervasive. A Soviet brigade with a strength of about 2,600 to 3,000 is located near Havana. An estimated 6,000 to 8,000 Soviet civilian advisers are in Cuba and allow the Soviet masters to monitor closely their Caribbean island. The Soviets provide Cuba's principal economic support--a leverage that Fidel Castro cannot ignore.

It would be a grave mistake to ignore the threat posed by this Soviet military outpost. It supports a massive intelligence collection center and sits astride critical sea lines of communications. In peacetime, 44 percent of all foreign trade tonnage and 45 percent of the crude oil imported into the United States pass through the Caribbean. In wartime, half of NATO's supplies would transit by sea from Gulf ports through the Florida Straits and onward to Europe. Much of the petroleum shipments and important reinforcements destined for U.S. forces in Europe would also sail from Gulf ports. The security of our maritime operations in the Caribbean, hence, is critical to the security of the Atlantic Alliance (Chart II.A.5).

In 1970, Soviet naval vessels spent approximately 200 shipdays in the South Atlantic. In 1980, this number had increased thirteen-fold to 2,600 shipdays. Given this presence and the current strength and disposition of the U.S. Navy, the South Atlantic sea lines of communications are far more vulnerable today than they were 10 years ago, or at the time of the Cuban missile crisis.

More immediately pressing than this threat to the Alliance in the event of war is the Soviet-Cuban effort currently underway to expand further the reach of totalitarian rule and Soviet influence. This attempt employs all the tools of modern empire building: propaganda and deception; the export of terrorism; massive shipments of arms; and, finally, the overthrow of established governments followed by the imposition of the new totalitarian rule, which is intended to be made irreversible through the import of "Praetorian guards" and police experts.

Nicaragua is close to the final stage of this intended irreversible transition, El Salvador is fighting in the middle phase, and Honduras and other Central American republics are now threatened by the early phase.

In Nicaragua, by the end of 1980, there were between 4,000 and 5,000 Cuban civilian advisers and about 1,500 Cuban military and security advisers. Cuban advisers are believed to be serving in key posts throughout the Government. There are also advisers in Nicaragua from East Germany, Bulgaria, North Korea, and the Soviet Union to assist in building the Sandinista Army from its currently estimated strength of 60,000 into a force of 250,000. Once achieved, this military buildup will mean 1 in 10 Nicaraguans under arms. Even at its present strength, the Sandinista Army represents the largest military force ever seen in the history of Central America (See Chart II.A.6).

Landing strips in Nicaragua have been lengthened and will soon be able to accommodate sophisticated jet

CHART II.A.5

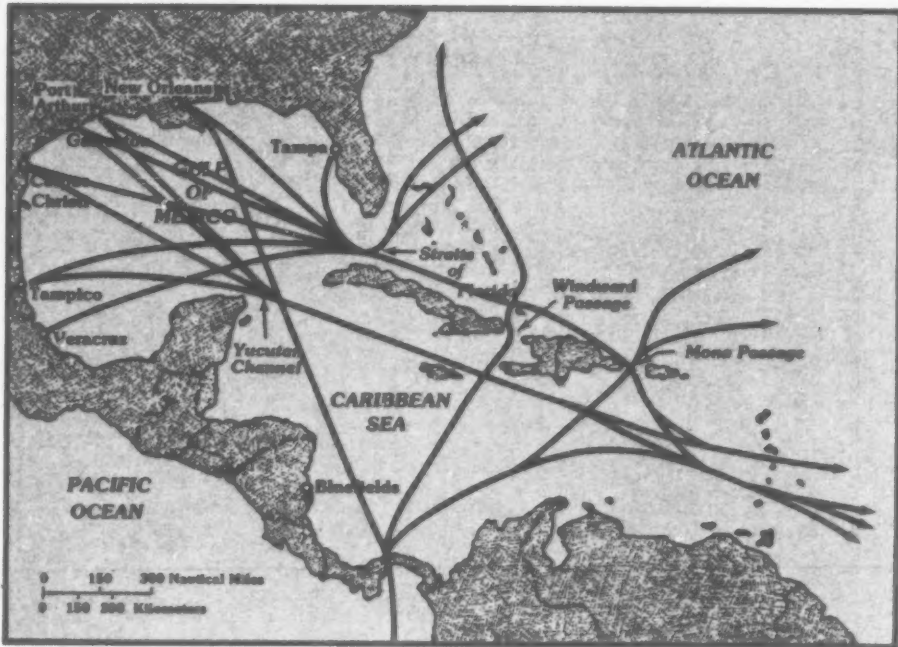
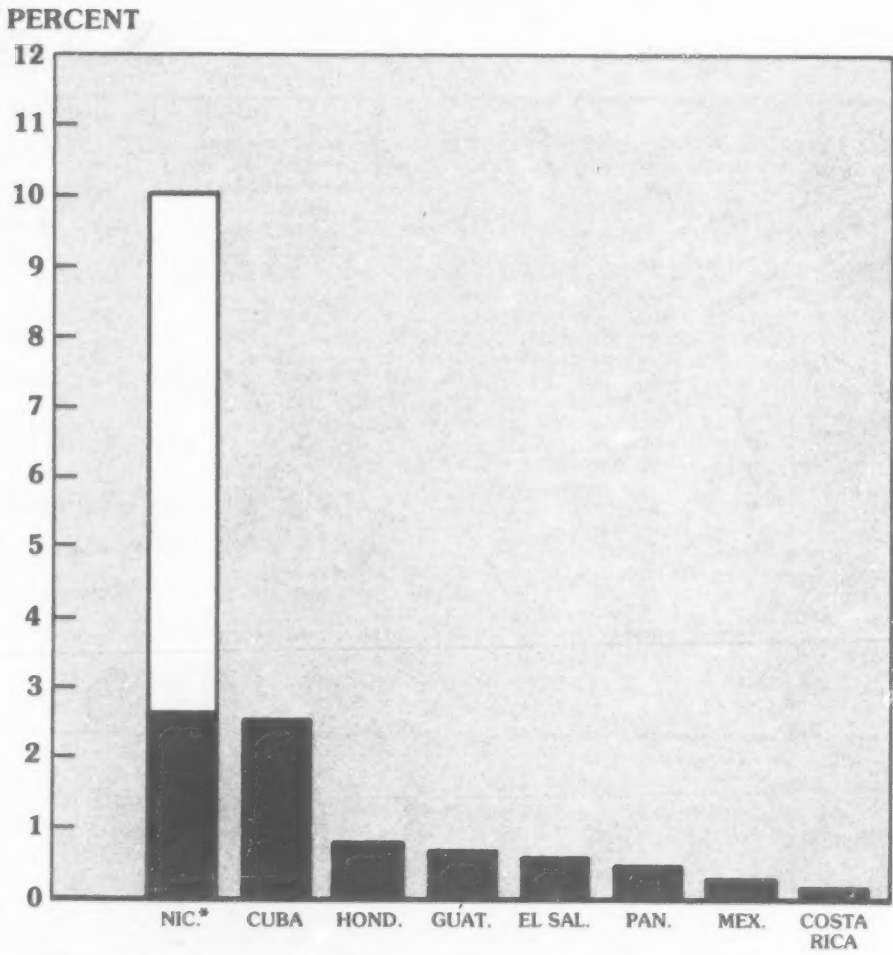
**(U) PRIMARY SEA LINES OF COMMUNICATION
IN THE CARIBBEAN BASIN**

CHART II.A.6
% OF POPULATION UNDER ARMS



* HAS ANNOUNCED IT WILL EXPAND TO 250,000

aircraft. Soviet advisers are deeply involved in directing the effort to upgrade the Nicaraguan Air Force. Nicaraguans have been trained as jet pilots and mechanics in Bulgaria. Although there is no evidence of MIGs in Nicaragua yet, the sighting of MIG-21 crates in Cuba provides cause for concern. Arrival of MIGs would dramatically increase Nicaragua's threat to its neighbors, whose fighter inventories consist of old day-fighter aircraft. Honduras, for example, has only 20 super Mystere and F-86 fighters with no all-weather capability.

The Nicaraguan military buildup represents a growing threat to efforts in the region to move toward pluralism and self-determination. The November 1981 elections in Honduras stand in marked contrast to the broken pledge of early elections by the Sandinistas in Nicaragua.

In El Salvador, the Cubans have played a key role in arranging for the acquisition and delivery of weapons to the Salvadoran guerrillas from Vietnam, and Eastern Europe by way of Nicaragua. Guerrilla recruits have been transported to Cuba and elsewhere for extensive training. The Soviet Union has, of course, funded and assisted these efforts by underwriting its Cuban proxy at a cost of \$3 billion annually and by supporting efforts to collect funds, arms, and supplies from the communist bloc for delivery to the guerrillas.

Cuba has not only been active in Nicaragua and El Salvador, but has also coordinated clandestine support organizations in Honduras, Costa Rica, and Guatemala. In fact, convincing evidence of Cuban subversion has surfaced in virtually every Caribbean Basin country. In Grenada, Cuban influence has reached such a high level that Grenada can be considered a Cuban satellite. The Cubans are constructing air and naval facilities on Grenada, which far exceed the requirements of that tiny island nation.

B. RESOURCES FOR THE LONG-TERM MILITARY COMPETITION

Economics and national defense are closely inter-related for all nations. The size and character of a country's military forces are limited, in the last analysis, by the size of its Gross National Product, its industrial and technological base, and the skills of its people. The vital interests which military forces are designed to protect are in part economic interests, such as access to vital raw materials--as the importance of Persian Gulf oil attests. In military alliances, the relative importance of the members depends in part on their industrial power and stature as trading partners.

The economic strength of the Free World critically affects the military balance between East and West. The larger economies and more advanced technology of the industrial democracies have enabled them to compete militarily with the Soviet bloc while using a much smaller proportion of their total national resources. The United States spends 5 to 6 percent of its GNP on defense, Western Europe 3 to 4

percent, and Japan 1 percent, while the Soviet Union devotes at least 13 to 14 percent of its GNP to military purposes.

Deciding how to allocate their national resources to defense is inevitably a controversial political issue for the industrial democracies. Necessary defense increases may seem too burdensome because they conflict with accustomed levels of taxation and with non-military spending. And during adverse business cycles, decisions in favor of defense spending are even less popular. As mentioned above, it is an unwarranted concern that our level of defense spending is responsible for the current inflation. Increased defense spending may raise prices for specific items we need--such as titanium and chromium--but this is the appropriate means of stimulating production and diverting non-defense consumption of those goods so that they will be available to meet our defense needs. Particular price adjustments do not constitute inflation; inflation is a general rise in prices. While we are committed to the rapid procurement of items which our military forces urgently need--even when this will increase costs--increased production rates will in some cases cut unit costs by achieving new economies of scale.

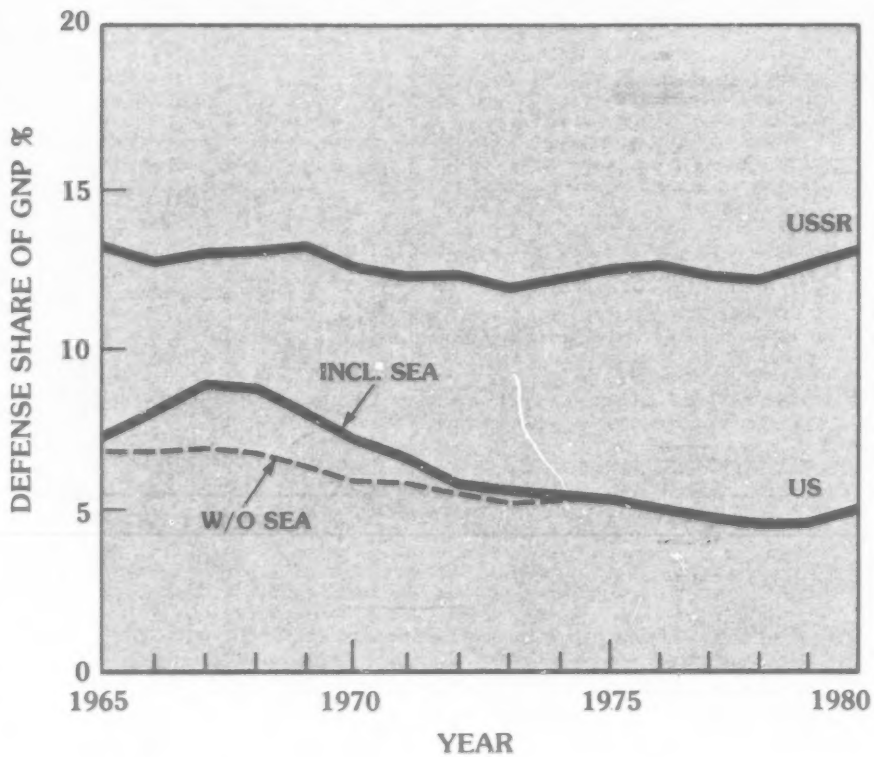
The great strength of the Free World has been the prosperity of its free market economies. This provides both steadily rising standards of living and the resources necessary for defense. Our adversaries extract their military program from less productive economies and must impose harsh restrictions on civilian consumption.

Despite our much larger economic base, however, the Soviet Union has for more than a decade committed more resources to military purposes. As Soviet GNP growth has recently declined below the rate at which military expenditures have advanced, the military effort is claiming a rising share of Soviet national output, as shown in Charts II.B.1 and II.B.2 below. Moreover, the Soviet Union devotes a significant additional part of its resources--more than one and one half percent of GNP--to the trade subsidies and surpluses and economic and military aid which sustain the Soviet empire. The various forms of Soviet economic support for Eastern Europe, Cuba, and Vietnam have grown sharply in recent years. The burden of these expenses as well as of the Soviet military program makes the Soviet economy's performance an important factor shaping the future of the Soviet empire.

During the next decade, Soviet economic growth rates are likely to continue declining at least as much as in the past decade. The Soviet system experiences chronic difficulty in improving productivity and the past sources of growth--large additions to capital stock and to the labor force--will be less available in the 1980s. A continuation of recent military expenditure trends, together with the increasing level of investment apparently necessary to compensate for the low return on investment, would further brake the already slow growth of consumption.

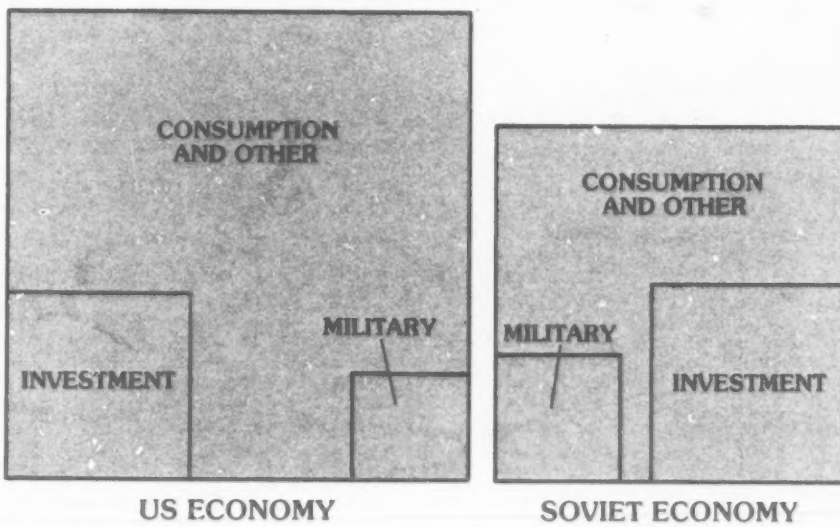
The Soviet economy is significantly affected by trade with the United States and our allies. Hence, it is

CHART II.B.1

**DEFENSE PROGRAMS' SHARE OF
GROSS NATIONAL PRODUCT**

SEA = SOUTHEAST ASIA COSTS

CHART II.B.2

**COMPARATIVE SIZE AND ALLOCATION
OF
US AND SOVIET ECONOMIES**

essential that trade policies be devised with full awareness of the security interests at stake. Western trade with Eastern Europe and the Soviet Union contributes to the economic strength of these communist countries, and thus inevitably to their ability to support military programs. Although the West may gain some economic benefits from these trade relations, leaving them to be determined by the private market forces is bound to work to the disadvantage of the West. Our East-West trade policies should take into account our larger strategic interests. The assistance East-West trade provides to Soviet military growth increases the threat to our security, the costs of our defense, or both.

Our willingness to do business with the Soviet Union should not be independent of Soviet behavior. For example, when Soviet policy brings about the suppression of the right of peoples in neighboring countries, as now in Poland, inaction by the United States and its allies in the spheres of trade and credits would signal acquiescence. Fortunately, the United States has not been inactive.

Western financial credits and grain sales clearly have helped the performance of the Soviet economy by conserving Soviet hard currency and supplying what Soviet agriculture cannot supply. In this connection, it is important to note that the Soviets have had exceedingly bad wheat harvests in three consecutive years. Western technology transfers to the Soviet Union--even in cases in which they do not seem to have any direct military application--permit the Soviets to put their own engineers to work on military research and development and, thus, reduce the "opportunity cost" of the Soviet military program.

Western purchases of Soviet raw materials contribute hard currency which the Soviets can use to acquire additional Western technology. Large extensions of Western credit simultaneously support Soviet purchases and create on our side an interest in seeing the debtor remain solvent.

In making East-West trade relations more consistent with Western security objectives, the United States tries to coordinate our policies with those of our allies. Unilateral American restrictions on economic relations with the Soviet bloc are usually less effective than joint actions. Although we recognize that our European allies and Japan sometimes see these matters differently, we will press for a greater recognition within our alliances of the national security stakes involved in East-West trade, even for "non-military" goods.

The large scale effort undertaken by the Soviet Union to acquire Western technology weakens our position in the military competition. This highly coordinated Soviet effort is essentially a raid on our technology base. The Soviets gain access to Western technology through a variety of channels, both legal and illegal. Under the guise of purchases for benign, civilian uses, the Soviets have obtained a wide range of equipment and technological know-how critical to their military program. Where they have failed to get what they want openly, they have resorted to a well-coordinated illegal acquisition program.

Until now, the West has failed to respond adequately to this challenge. Our export controls have been loose and our enforcement programs lax. Too many loopholes in our international control system have persisted. Clearcut violations of international export laws have been forgiven and forgotten. Violators, when caught, either have not been punished or got off with modest fines. As a result, the Soviet raid on our technology base has not only continued--it has increased in scope.

The laissez-faire attitude of the last decade has helped the Soviets to develop new generations of smart weapons, to dramatically improve their airlift capability, to make their nuclear weapons more accurate, and to enhance their command and control with better computers and communications. Technology for military use acquired from the West includes high-speed computers used in weapons systems design, signal processing, command and control, and intelligence gathering; semi-conductor manufacturing know-how that makes Soviet weapons more reliable and precise; and guidance technology for aircraft, ships, submarines, and missiles. The Soviets have also acquired precision machine tools and sophisticated manufacturing process information for use in improving their industrial base.

Such exploitation of the technological creativity and inventiveness of free Western societies allows the Soviet Union to save billions of rubles and years of research time. By acquiring proven technology, the Soviets can avoid costly mistakes. The Atlantic Alliance and Japan rely on a voluntary organization called "Coordinating Committee," or COCOM, to control the flow of technology to the East. This system, however, has serious weaknesses. Under COCOM auspices, shipbuilding, heavy vehicle, and micro-electronic manufacturing processes have been legally exported to the Soviet Union. These legal acquisitions are complemented by even more far-reaching illegal acquisitions. For example, the Soviets often used non-aligned or neutral nations as a clearing house for embargoed goods. The Soviet acquisition of Western technology is guided by a comprehensive intelligence system, focused on emerging technologies--computer memory, large-scale integrated circuits, genetic engineering, fracture mechanics, and superplasticity--all of which are potentially of high military value.

This Administration is taking measures to protect our technology more effectively. To strengthen and enforce COCOM restrictions, the President has called for a high-level COCOM meeting, the first since the early 1950s, to tighten the international control structure and encourage a more active enforcement role among member nations. We are participating in a special military subcommittee to identify military uses of technology that have been neglected in the past and refine the strategic criteria under which the COCOM system operates.

The long-term competition between the Free World and the Soviet bloc will also be affected by economic developments shaping our own economy and the economies of our

allies. The continuing security of our alliances will depend on increasing military contributions from our prosperous allies. The countries of Western Europe in the past decade have faced particular economic difficulties because of the sudden escalation of energy costs. The longer-term growth of their economies may be slowed by their concentration in relatively "mature" industries rather than in more dynamic areas built around newer technologies. This Administration recognizes that defense requirements in times of economic stress pose difficult political and economic choices for the West European governments and people, as they do for the United States.

Japan and other East Asian countries, by contrast, have experienced rapid economic growth, and have become major trading partners for the United States. Hence, these countries are becoming increasingly capable of larger military efforts for their own self-defense. It is essential for the health of the Free World that this potential be realized.

PROGRAMS

A. LAND FORCES

1. Introduction

a. Force Structure

The land forces of the United States consist of the active and reserve forces of the Army and the Marine Corps. These forces are designed to assist in deterring war; should deterrence fail, they are structured and equipped to conduct ground combat to defeat the enemy. To fulfill these tasks, we maintain strong deployments in Europe and the Western Pacific, forward deployments afloat, and rapidly deployable reserves in the United States. Our forces provide the capability to engage the enemy at all levels--from counter-terrorism operations to full-scale combat against a heavily armed enemy.

We remain mindful of the consequences of failure to be prepared for war in Europe and of the increasing proliferation of sophisticated weapons throughout the world. Accordingly, a large portion of our force--particularly the Army's armored and mechanized divisions--is designed and equipped primarily to oppose armor-heavy, tactically mobile forces. A smaller portion of the force--including the Army's 82nd Airborne Division, ranger battalions, and the three active Marine divisions (as part of a Marine Air/Ground Task Force)--is configured and trained primarily for rapid-response and forcible-entry operations worldwide. Each element of the force is dependent on reinforcement and logistics support to conduct sustained combat operations.

In structuring our land forces, we seek to strike the appropriate balance between heavy and light forces and to improve the capabilities and responsiveness of both. This presents a dilemma for our deployment strategy: those forces that are most rapidly deployable are least suited for large-scale combat against heavily armored forces. The more capable mechanized and armored divisions place a severe strain on our strategic airlift resources and must be moved and supported primarily by sealift.

To help resolve this problem, we are seeking to increase the armor-defeating capability of our lighter forces while maintaining their rapid-deployment capability. Because deploying the support elements for our forces--whether heavy or light--also poses problems for our mobility forces, simply making a division "light" will not completely remedy the situation. Therefore, we are pursuing programs to preposition heavier equipment near potential trouble spots to ameliorate this problem.

b. Force Composition

Our land forces consist of 23 divisions, of which 19 (16 Army and 3 Marine Corps) are active and 9 (8 Army and 1 Marine Corps) are Reserve Components. These divisions (about 18,000 men each), supplemented by separate nondivisional brigades and regiments (4,000-5,000 men each)

and by separate artillery, aviation, and maneuver battalions (500-1,000 men each), form the cutting edge of our land forces. They are supported by a wide variety of active, reserve, and host-nation support units and are backed by an extensive training and support base. Fiscal constraints will require our active forces to continue to rely on Reserve Components to reach their full combat potential. Of our 19 active divisions, 8 require roundout by reserve combat battalions and brigades to reach their full complement.

c. Force Disposition

Chart III.A.1 depicts the location of all active and reserve divisions. In addition to the major deployments shown, three brigades of CONUS-based Army divisions are forward deployed in Europe, and one regiment of the Okinawa-based Marine division is stationed in Hawaii. In addition, the Army maintains 3 separate brigades and regiments in Europe, 4 active and 25 reserve brigades and regiments in CONUS (not involved in roundout), plus one brigade each in Panama and Alaska.

2. FY 1983-87 Program

a. Program Objectives

The primary goal of our five-year program is to improve the combat capability of our existing ground forces. As a result, no significant expansion of our ground forces is planned. We seek to balance the force structure in order to improve responsiveness to both NATO and non-NATO contingencies; to improve the sustainability of our forces, not only in Europe but in other theaters worldwide; and to modernize our forces to enhance their effectiveness. The details of the program initiatives we are undertaking to accomplish these objectives are discussed below.

b. Program Initiatives

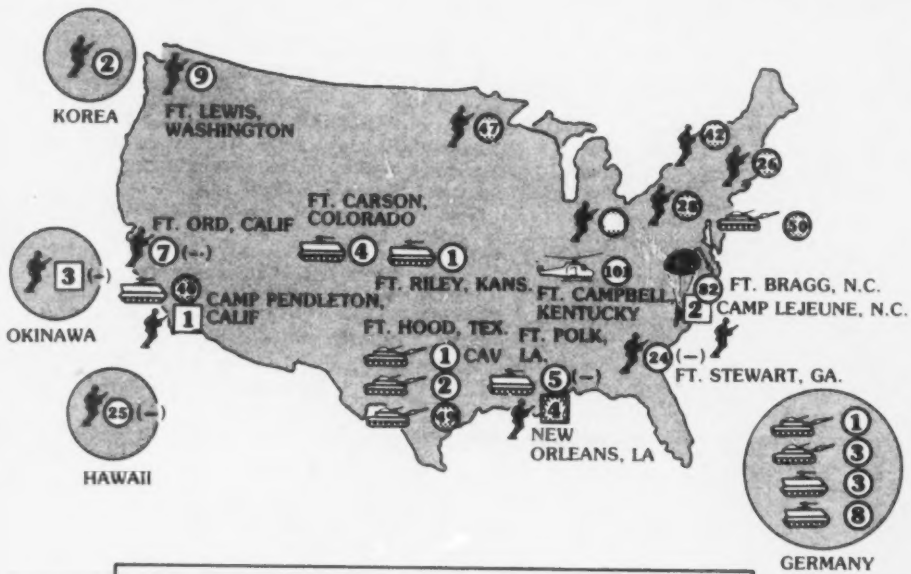
(1) Balance Force Structure to Improve Responsiveness

The Army will continue to increase the density of 155mm self-propelled howitzers in its European-based artillery battalions. In FY 1983, these battalions will be restructured from 18 to 24 howitzers. In FY 1982, the Marine Corps will complete the procurement of M198 155mm towed howitzers to replace 105mm towed howitzers in its three active divisions and to permit the formation of a second general support artillery battalion in each active artillery regiment by FY 1986.

The Army will reactivate 13 rifle companies of the 9th and 25th Divisions and activate one Air Defense Artillery battalion (Patriot). It will also reorganize portions of the 101st Airborne Division (Air Assault) to provide increased capabilities for forward support of fuel and ammunition, communications, anti-armor, and air defense.

CHART III.A.1

DEPLOYMENT OF U.S. LAND FORCES



ARMY		ACTIVE	DIVISION TYPE		AIR ASSAULT			
		RESERVE						
MARINES		ACTIVE						AIRBORNE
		RESERVE						

In FY 1982, the Marine Corps is activating nine additional Forward Area Air Defense (FAAD) platoons. Twelve platoons will be operational when these activations are completed. In FY 1984, it will begin activation of nine additional TOW platoons, doubling each division's TOW capability by FY 1986.

The Marine Corps plans to form a Light Armored Vehicle (LAV) battalion in each of its active divisions. (Personnel for the new battalions will be provided primarily by reducing and restructuring infantry battalions.) The first battalion will achieve initial operating capability (IOC) in FY 1983; the remaining battalions will be operational by FY 1986. The Army plans to equip two existing battalions of each infantry division with LAVs, with a planned IOC of FY 1984.

The Army's 9th Infantry Division is being used as a test-bed for evaluating new technology and doctrine to balance combat power with strategic mobility. The Army is continuing to equip the division with modern anti-armor weapons and high-technology systems to test how these might improve its combat power, survivability, and tactical and strategic mobility. If successful, these concepts could be extended to other Army divisions.

We are continuing programs to preposition equipment and supplies for CONUS-based Army and Marine Corps units in Europe and Southwest Asia. Prepositioning speeds deployment to these areas in time of crisis by significantly reducing strategic lift requirements. (The details of our prepositioning programs are described in Part III.G.)

(2) Improve Force Sustainability

Ammunition procurement, which has been underfunded in recent years, has been given increased emphasis in our FY 1983-87 program. Our program provides funds to build our inventory of war reserve munitions to levels sufficient to support U.S. and Republic of Korea (ROK) forces; sustain our forces in Europe; and sustain U.S. forces in a non-NATO contingency.

(3) Modernize Forces

Our force modernization program capitalizes on the growth in funding initiated in the FY 1981 Budget Supplemental and FY 1982 Budget Amendment. In applying these additional funds, we seek to procure systems at more efficient production rates, thereby promoting program stability and holding down unit costs. Accordingly, we will accelerate the deployment of new systems and begin to eliminate critical shortages in existing equipment.

(a) Close Combat

To counter Soviet advances in armored combat systems, we must develop and field improved

systems capable of defeating enemy armor while providing our forces with increased firepower, tactical mobility, and survivability.

M1 ABRAMS Tank--The Army initiated procurement of the M1 battle tank in FY 1979; increased funding, commencing with the FY 1981 Budget Supplemental, has been used to accelerate its deployment schedule. The FY 1982 program will increase the production rate from 30 to 60 tanks per month by November 1982; by January 1985, the production rate will increase to 90 tanks per month. By the end of FY 1987, this accelerated schedule will enable the Army to procure 30 percent more M1s than previously programmed. This will allow the Army fully to equip 7 of its 10 active armored/mechanized divisions by the end of the program period. The Army will achieve its acquisition objective of 7,058 M1s during the FY 1988 Funded Delivery Period (FDP) and reach its tank acquisition objective of 15,106 units during the FY 1987 FDP.

The Bradley Fighting Vehicle System (BFVS), consisting of the Infantry Fighting Vehicle (IFV) and the Cavalry Fighting Vehicle (CFV), is an out-growth of the Mechanized Infantry Combat Vehicle Program. Our program will increase the production rate from 50 to 90 vehicles per month by the end of FY 1986. By the end of FY 1987, 6 of our 10 active armored/mechanized divisions will have the BFVS. The Army's initial operating objective of 6,882 vehicles will be achieved during the FY 1990 Funded Delivery Period.

Amphibious Assault Vehicle (LVT)--The Marine Corps will continue its program to procure 382 additional amphibious assault vehicles (product-improved version) to support maritime prepositioning requirements for three brigades. Concurrently, it will continue a service life extension program to improve its existing LVT-7 fleet.

Light Armored Vehicle (LAV)--The Marine Corps and Army plan to initiate procurement of light armored vehicles to increase the ground combat mobility and firepower of their light infantry units. Current plans call for joint-service procurement of a single off-the-shelf vehicle, with several system variants.

TOW Missile System--The Army and Marine Corps will continue procurement of the TOW anti-tank missile with an improved warhead and guidance system. Concurrently, existing missiles will be retrofitted with these improvements. The improved version will be capable of defeating advanced-technology armor.

	<u>FY 1981 Actual Funding</u>	<u>FY 1982 Planned Funding</u>	<u>FY 1983 Prop'd Funding</u>	<u>FY 1984 Prop'd for Authorization</u>
<u>CLOSE COMBAT PROGRAMS</u>				
<u>M-1 Tank</u>				
Development:				
\$ Millions	113.0	111.1	66.3	61.3
Procurement:				
Quantity	569	665	776	1,080
\$ Millions	1,482.2	1,659.8	2,025.0	2,634.9
<u>IFV/CFV</u>				
Development:				
\$ Millions	41.7	103.4	50.5	33.5
Procurement:				
Quantity	400	600	600	555
\$ Millions	668.7	918.0	872.4	846.1
<u>LVT</u>				
Procurement:				
Quantity	--	34	168	171
\$ Millions	12.0	63.9	151.9	163.5
<u>LAV</u>				
Development:				
\$ Millions	17.9	10.0	11.2	9.8
Procurement:				
Quantity	--	38	392	590
\$ Millions	--	36.2	209.8	309.3
<u>TOW Missiles</u>				
Procurement:				
Quantity	12,000	14,666	13,000	20,371
\$ Millions	100.9	141.9	174.1	277.5

(b) Helicopters

Helicopters enhance the firepower and tactical mobility of our land forces. The primary objective of our modernization program is to improve the survivability and enhance the effectiveness of our attack and utility helicopters.

Attack Helicopters--The AH-1 COBRA, equipped with the TOW anti-armor missile, is our primary attack helicopter. The Army will continue developments to enhance the survivability of the 700 AH-1S COBRA/TOW aircraft presently in its inventory. Concurrently, it

will field the AH-64 APACHE advanced attack helicopter. The AH-64 will be able to operate at high altitudes and in adverse weather conditions and will possess significantly improved firepower by virtue of its 30mm gun, 2.75-inch rockets, and new HELLFIRE anti-armor missile system.

Utility Helicopters--The UH-1 (Huey) has been the mainstay of our utility helicopter force for more than a decade. Since 1979, we have been pursuing a modernization program to replace the UH-1 with the more capable and survivable UH-60A BLACKHAWK in selected Army units. The current program will provide 16 percent more BLACKHAWKS to the force during FY 1982-84 than previously planned.

	<u>FY 1981</u> <u>Actual</u> <u>Funding</u>	<u>FY 1982</u> <u>Planned</u> <u>Funding</u>	<u>FY 1983</u> <u>Prop'd</u> <u>Funding</u>	<u>FY 1984</u> <u>Prop'd for</u> <u>Authorization</u>
<u>HELICOPTER</u>				
<u>PROGRAMS</u>				
<u>AH-1S</u>				
<u>Modification</u>				
Development:				
\$ Millions	2.5	19.6	12.3	4.5
Procurement:				
\$ Millions	167.9	77.3	37.4	49.7
<u>AH-64</u>				
Development:				
\$ Millions	172.9	91.9	33.7	39.4
Procurement:				
Quantity	--	11	48	96
\$ Millions	58.8	544.0	965.0	1,440.6
<u>HELLFIRE</u>				
Development:				
\$ Millions	51.5	24.2	19.3	0.3
Procurement:				
Quantity	--	680	3,971	6,218
\$ Millions	25.7	114.1	249.2	255.1
<u>UH-60</u>				
Procurement:				
Quantity	80	96	96	84
\$ Millions	486.5	613.0	733.0	545.8

(c) Air Defense

Since technology has not yet provided a weapon system that can counter all types of air threats (aircraft, helicopters, and missiles), we must develop a balanced and integrated family of ground-based and airborne air defense systems. To be effective, these systems must be supported by radars, command and control systems, and electronic warfare equipment, and augmented by passive techniques such as camouflage, decoys, and dispersion. Our ground-based air defense systems are designed to provide a balanced mix of weapons with complementary capabilities.

The STINGER is a man-portable, shoulder-fired, infrared guided missile system designed to defend against low-altitude attacks at short ranges. The system is being procured by the Army and Marine Corps to replace existing REDEYE weapons.

The DIVAD Gun is a self-propelled 40mm air defense weapon that employs radar acquisition and tracking for all-weather and day/night engagements. In addition, it possesses a complementary computer-aided optical system with a laser range finder. The DIVAD Gun will replace the 20mm VULCAN in air defense artillery battalions of Army mechanized and armored divisions. The acquisition objective of 618 systems will be achieved during the FY 1987 Funded Delivery Period.

PATRIOT, the Army's advanced radar-guided air defense missile system, is designed to conduct multiple simultaneous engagements against high-performance aircraft. The PATRIOT's trainable, multi-function, electronically scanned, phased-array radar gives it a significant electronic counter-countermeasure (ECCM) capability.

CHAPARRAL, the short-range air defense missile organic to most active Army divisions, will remain in service through the 1990s. We will replace the propellant in aging rocket motors reaching the end of their shelf-life, modify the system with forward-looking infrared (FLIR) for engaging targets at night and in poor weather, and develop a guidance system with high resistance to infrared countermeasures.

Improved HAWK--Development efforts are being continued to improve the capability of Army and Marine Corps HAWK systems to operate effectively in an electronic countermeasures (ECM) environment. Funds are also provided for replacement missile motors and modifications to improve system reliability, availability, and maintainability.

	FY 1981 Actual <u>Funding</u>	FY 1982 Planned <u>Funding</u>	FY 1983 Prop'd <u>Funding</u>	FY 1984 Prop'd for <u>Authorization</u>
<u>AIR DEFENSE</u>				
<u>PROGRAMS</u>				
<u>STINGER</u>				
Development:				
\$ Millions	5.7	16.1	--	--
Procurement:				
Quantity	1,415	3,032	3,816	4,733
\$ Millions	101.0	232.8	330.3	374.0
<u>DIVAD</u>				
Development:				
\$ Millions	65.2	30.0	10.9	--
Procurement:				
Quantity	--	50	96	130
\$ Millions	138.0	376.2	673.9	747.8
<u>PATRIOT</u>				
Development:				
\$ Millions	75.4	57.8	47.1	86.1
Procurement:				
Quantity	130	176	376	664
\$ Millions	462.2	755.1	881.0	1,127.4
<u>CHAPARRAL</u>				
Development:				
\$ Millions	22.9	19.6	26.4	24.5
Procurement:				
Quantity	--	--	--	--
\$ Millions	82.6	89.1	32.5	13.1
<u>Improved HAWK</u>				
Development:				
\$ Millions	9.5	39.4	38.0	27.1
Procurement:				
Quantity	--	388	--	138
\$ Millions	51.5	187.2	108.1	152.2

(d) Artillery Fire Support

Our land forces are numerically outgunned by Soviet artillery. To redress this imbalance, we are undertaking programs to improve target acquisition, fire control, and laser designation for modern munitions,

and to provide improved weapons to our force and additional munitions to our stockpile.

Target Acquisition--The Army has initiated the Battlefield Data System (BDS) development program to satisfy its requirements for surveillance and target acquisition. The Remotely Piloted Vehicle (RPV) now in development will provide a capability to locate targets, adjust artillery fire, and designate targets for laser-guided weapons.

Fire Control--The TACFIRE fire control system will be improved to maintain its effectiveness into the 1990s by enhancing communications management and reducing the size and weight of the Fire Direction Center. Another improvement in the fire support area is the Battery Computer System now in procurement. This small computer provides firing data for individual guns in a battery, thus enhancing battery survivability by enabling optimal use of protective terrain tactics.

The Artillery Computer System (ACS), currently under development by the Marine Corps, is a lightweight computer that operates on internal batteries. It will be employed by firing batteries.

Laser Designators/Munitions--Laser designators will be used to illuminate and designate targets for COPPERHEAD, HELLFIRE, laser-guided bombs, and projectiles. The Ground Laser Locator Designator (GLLD) and the Modular Universal Laser Equipment (MULE) are currently in procurement.

The COPPERHEAD, a 155mm laser-guided projectile, will improve the capability of artillery against armored targets. Our program will provide 46 percent more COPPERHEAD projectiles than previously planned during FY 1982-84. An IOC of FY 1982 is scheduled.

Weapons--The Multiple-Launch Rocket System (MLRS) is a high-rate-of-fire general support artillery rocket system designed to counter enemy artillery, to suppress enemy air defenses, and to supplement cannon artillery fires. An IOC of FY 1983 is scheduled.

Procurement of the M198 155mm towed howitzer will be completed in FY 1982. The M198 will replace the 105mm and 155mm (M114A1) towed howitzers in selected Army light infantry and Marine divisions. The M198 has 50 percent greater range and better reliability than the existing M114A1.

Ammunition--In FY 1983, we will continue to build our inventories of improved conventional munitions (ICMs), rocket-assisted projectiles (RAPs), propelling charges for new long-range weapons, and scatterable mines. We are requesting \$661.6 million in FY 1983 to procure these items for 155mm and 8-inch artillery.

	<u>FY 1981 Actual Funding</u>	<u>FY 1982 Planned Funding</u>	<u>FY 1983 Prop'd Funding</u>	<u>FY 1984 Prop'd for Authorization</u>
<u>ARTILLERY</u>				
<u>FIRE SUPPORT</u>				
<u>PROGRAMS</u>				
<u>BDS</u>				
Development:				
\$ Millions	--	--	27.9	43.1
<u>RPV</u>				
Development:				
\$ Millions	63.1	77.6	83.7	117.2
<u>TACFIRE</u>				
Development:				
\$ Millions	2.1	5.9	7.3	28.4
Procurement:				
\$ Millions	86.9	--	--	--
<u>Battery Com- puter System</u>				
Procurement:				
Quantity	168	217	147	146
\$ Millions	34.9	45.4	28.2	29.9
<u>ACS</u>				
Development:				
\$ Millions	--	--	1.9	.7
Procurement:				
Quantity	--	--	--	161
\$ Millions	--	--	--	11.8
<u>GLLD</u>				
Procurement:				
Quantity	90	240	250	209
\$ Millions	21.3	58.7	45.4	45.6
<u>MULE</u>				
Procurement:				
Quantity	--	40	120	120
\$ Millions	--	21.2	47.8	16.8
<u>COPPERHEAD</u>				
Development:				
\$ Millions	6.0	3.3	2.1	--
Procurement:				
Quantity	3,125	4,550	8,420	8,320
\$ Millions	117.6	141.1	204.5	187.4

	FY 1981 Actual Funding	FY 1982 Planned Funding	FY 1983 Prop'd Funding	FY 1984 Prop'd for Authorization
<u>MLRS</u>				
Development:				
\$ Millions	69.9	38.2	23.2	--
Procurement:				
Quantity	2,340	2,496	23,640	36,000
(Rockets)				
\$ Millions	115.6	205.6	444.4	584.8
<u>M198</u>				
Procurement:				
Quantity	228	359	--	--
\$ Millions	71.8	131.3	--	--

Artillery Ammunition

Type Round	FY 1983			
	USMC		ARMY	
	\$ Millions	Quantity	\$ Millions	Quantity
155mm ICM	131.7	237,000	237.3	428,000
155mm RAP	--	--	17.7	24,000
155mm Scatter- able Mines	95.3	32,000	156.5	72,000
155mm Propelling Charges	50.9	474,000	45.3	699,000
8-Inch RAP	.5	1,000	44.9	28,000
8-Inch ICM	53.4	43,000	104.2	88,000

(e) Tactical and Support
Vehicles

The Army and Marine Corps will continue to upgrade their tactical wheeled vehicle fleets as well as to remedy the severe problems caused by shortages and over-age, over-mileage vehicles. Efforts are under way to implement the findings of the 1980 Army Tactical Wheeled Vehicle Requirements Study. Concurrently, the Army is embarking on a major program to replace commercial vehicles that are used for a variety of tasks. These vehicles are a critical adjunct to the tactical fleet, because their use reduces mileage and wear on expensive and scarce tactical vehicles, resulting in higher operational ready rates.

High Mobility Multi-Purpose Wheeled Vehicle (HMMWV)--The Army and Marine Corps will begin selective replacement of tactical vehicles in the 1/4-ton to 1-1/4-ton range with the 5/4-ton HMMWV. This highly mobile vehicle, currently under development contract, will have a common chassis with three variants--weapons carrier, utility, and ambulance--that can be configured for specific mission needs by the application of modification kits.

Commercial Utility and Cargo Vehicle (CUCV)--The CUCV family of vehicles will complement the HMMWV by replacing vehicles operating in less-demanding tactical environments. The CUCV is a 5/4-ton, commercial off-the-shelf vehicle that will be procured in cargo, ambulance, and utility versions.

5-Ton Truck--The M939-series 5-ton truck is a product-improved version of the M813 series being procured by the Army and Marine Corps.

10-Ton Heavy Expanded Mobility Tactical Truck (HEMTT)--The Army will continue to procure a new series of 10-ton trucks. The HEMTT is a high-mobility vehicle assembled from commercially proven components and produced in five body styles for use in a variety of combat and combat support units. In FY 1982, the Marine Corps initiated procurement of the Logistics Vehicle System, a HEMTT variant with four interchangeable rear body units, in lieu of several trucks and trailers previously planned. This program will accelerate by about 18 months the start of the Marine Corps' replacement of its heavy vehicle fleet.

	FY 1981 Actual Funding	FY 1982 Planned Funding	FY 1983 Prop'd Funding	FY 1984 Prop'd for Authorization
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TACTICAL AND
SUPPORT VEHICLE
PROGRAMS

HMMWV

Development:				
\$ Millions	4.7	--	2.7	--
Procurement:				
Quantity	--	--	2,550	9,648
\$ Millions	--	--	79.0	274.7

CUCV

Procurement:				
Quantity	--	3,522	13,950	24,633
\$ Millions	--	43.1	190.1	328.9

	FY 1981 Actual Funding	FY 1982 Planned Funding	FY 1983 Prop'd Funding	FY 1984 Prop'd for Authorization
<u>5-Ton Truck</u>				
Procurement:				
Quantity	190	3,710	5,139	3,615
\$ Millions	82.7	305.6	408.5	281.7
<u>10-Ton Truck</u>				
Procurement:				
Quantity	635	1,274	2,370	1,335
\$ Millions	90.3	194.5	374.1	219.5

(f) Tactical Communications,
Signal, and Electronic
Intelligence

Command, control, communications, and intelligence (C³I) programs for our land forces are designed to improve our force management capabilities; to enhance interoperability, survivability, and restorability of essential C³I functions; and to exploit the enemy's use of electronic emitters. Three programs--Joint Tactical Communications (TRITAC), Joint Tactical Fusion Program (JTFP), and Joint Interoperability of Tactical Command and Control Systems (JINTACCS)--are discussed in Part III.F. Other key C³I programs are:

Ground Mobile Forces (GMF) Satellite Communications--The GMF program is designed to provide reliable, jam-resistant communications support to deployed commanders independent of terrestrial extension. The Army, Air Force, and Marine Corps will procure several hundred of the various types of transportable terminals, as well as supporting equipment.

Single-Channel Ground and Airborne System VHF (SINCGARS-V)--The SINCGARS-V program will provide secure, ECCM-capable VHF radios to replace current vehicular, manpack, and aircraft tactical VHF radios. Some 240,000 radios will eventually be procured for all four Services.

Position Location Reporting System (PLRS) and PLRS/Joint Tactical Information Distribution System (JTIDS) Hybrid--The PLRS, currently under development by the Army and Marine Corps, will provide combat commanders with automatic, near real-time, precise location of their forces on the battlefield, regardless of terrain, weather, or geographical location. The PLRS/JTIDS hybrid is intended to satisfy the Army's requirements for secure, jam-resistant battlefield data distribution among command and control, intelligence, surveillance, target acquisition, and weapons systems.

Electronic Combat Jamming System--

To increase its ability to jam enemy communications, the Army is continuing production of additional MLQ-34s (TACJAM) with FY 1982 funds, procuring VLQ-4 applique jeep-mounted PIRAHNA jammers, and initiating a contract for EH-60 electronic warfare helicopters to be delivered in FY 1984. It will protect its helicopters and special-mission fixed-wing aircraft against radar, infrared, and other electronically guided missiles and guns by procuring additional aircraft survivability equipment, including radar/laser/missile warning receivers, infrared and radar jammers, and dispensers for chaff and flare decoys.

Tactical Intelligence--Principal

tactical intelligence modernization programs include continued procurement of the Improved GUARDRAIL V, improvements to the TRAILBLAZER (TSQ-114A), and a tactical fusion system.

	<u>FY 1981</u> <u>Actual</u> <u>Funding</u>	<u>FY 1982</u> <u>Planned</u> <u>Funding</u>	<u>FY 1983</u> <u>Prop'd</u> <u>Funding</u>	<u>FY 1984</u> <u>Prop'd for</u> <u>Authorization</u>
<u>TACTICAL COM-</u>				
<u>MUNICATIONS,</u>				
<u>SIGNAL, AND</u>				
<u>ELECTRONIC</u>				
<u>PROGRAMS</u>				
<u>GMF Sat Comm</u>				
Development:				
\$ Millions	10.2	16.5	17.5	24.0
Procurement:				
\$ Millions	70.6	98.8	112.7	71.9
<u>SINCGARS-V</u>				
Development:				
\$ Millions	25.1	13.7	17.9	16.7
Procurement:				
Quantity	--	--	600	1,970
\$ Millions	--	--	19.8	21.8
<u>PLRS and PLRS/</u>				
<u>JTIDS</u>				
Development:				
\$ Millions	27.6	28.3	42.3	26.0
Procurement:				
\$ Millions	--	2.4	3.2	4.3

	<u>FY 1981</u> <u>Actual</u> <u>Funding</u>	<u>FY 1982</u> <u>Planned</u> <u>Funding</u>	<u>FY 1983</u> <u>Prop'd</u> <u>Funding</u>	<u>FY 1984</u> <u>Prop'd for</u> <u>Authorization</u>
<u>Electronic</u>				
<u>Jamming</u>				
Development:				
\$ Millions	18.8	35.6	30.1	69.8
Procurement:				
\$ Millions	61.0	111.2	45.1	98.3
<u>Tactical</u>				
<u>Intelligence</u>				
Development:				
\$ Millions	26.7	14.1	25.2	32.4
Procurement:				
\$ Millions	135.2	127.4	186.0	189.3

B. NAVAL FORCES

1. Introduction

The logical implications of a global strategy, combined with the need to defend our interests and support our forces in distant parts of the world, lead to a clear need for increased U.S. naval power. Our FY 1983-87 program, therefore, contains a significant increase in the number of new ships, aircraft, and weapons procured for the Navy. At the same time, we are emphasizing initiatives that will enhance the near-term readiness of our forces and improve their sustainability. I believe our program strikes a reasonable balance between near-term needs and long-term goals, while seeking to maintain a favorable trend in the naval balance.

a. Program Goals

Our primary goal is to establish and maintain maritime superiority over any likely enemy taking due account of both his allies and ours. This goal dictates an increase in U.S. naval power. We intend to expand our forces while simultaneously pursuing a balanced program that will improve their readiness in both the near and the long terms.

Our program meets four key objectives:

- increasing the offensive striking power of the fleet;
- improving day-to-day fleet readiness and sustainability;
- strengthening our anti-submarine and anti-air defenses; and
- modernizing our existing forces while making major increases in the number of fleet ships and aircraft.

b. Changes in Fleet Size and Force Structure

We now aggregate our most capable and ready naval forces for sea control and power projection into a new "deployable battle force" category, shown in Table III.B.1. The Navy's current force level goals are addressed in the context of this new counting method, which focuses on those ships that are manned, trained, and materially ready for wartime deployment.

TABLE III.B.1

Deployable Battle Forces ^{1/}
(End FY 1982)

Aircraft Carriers	13
Battleships	0
Cruisers/Destroyers	112
Nuclear Attack Submarines	91
Diesel Attack Submarines	5
Amphibious Ships	65
Frigates	86
Patrol Combatants	6
Mine Warfare Ships	3
Mobile Logistic Ships	71
Combat Support Ships	23
Strategic Ships	<u>39</u>
Total	514

1/ Includes appropriate Naval Reserve Force (NRF) and Navy Fleet Auxiliary Force (NFAF) ships.

When this Administration took office, our deployable battle force numbered 479 ships. By the end of FY 1982, this number will increase to 514 ships. This includes the first 4 of an eventual 24-ship Naval Reserve Force composed of FF-1052s and FFG-7s. Counting our sea-lift, auxiliary, and reserve mobilization ships brings the total force to 569 ships. Current projections show the deployable battle force will grow to about 610 ships and the total operating inventory to about 640 ships by the early 1990s. By that time, nearly all the ships in our five-year shipbuilding plan (FY 1983-87) will have joined the fleet.

The threat is dynamic, and the many possible conflict scenarios require different naval strategies. In view of these variables, it is neither possible--nor appropriate--to state with precision that a certain number of ships is adequate for all purposes--or for all circumstances. We will continue to take into account other important factors that, in the aggregate, have a greater impact on overall capability than numbers of ships alone. These include current force readiness and sustainability, personnel training and morale, the types and capabilities of aircraft and ships, and allied naval force contributions.

2. FY 1983-87 Navy Programs

a. Anti-Air Warfare Programs

Soviet anti-ship cruise missiles (ASCM) pose a serious threat to our naval forces and sea lines of communication (SLOC). Soviet capabilities are improving across the entire spectrum of launch platforms. Soviet Naval Aviation (SNA) can threaten our naval forces over a large part of the world's ocean area.

Our forces employ a defense-in-depth approach that consists of an outer defense zone, a surface-to-air missile (SAM) area defense zone, and a point defense zone. Our proposed program will upgrade our capability in each of these zones.

Our preferred approach is to destroy enemy bombers before they can reach ASCM launch range by striking their bases or by destroying them in transit. Where geographically feasible, barriers composed of land-based interceptors and surveillance systems will allow attrition of Soviet bombers before they penetrate the outer defense zone of our surface forces.

Carrier-based F-14 and F-4 fighters, EA-6B electronic warfare aircraft, and E-2C airborne early warning aircraft provide the outer defense zone capability to intercept bombers before missile launch. SAM area defense capability is provided by our anti-air warfare (AAW) ships; point defense is provided by point defense SAMs, guns, and electronic warfare (EW) systems.

(1) Long-Range Surveillance Against Bombers

To destroy a significant percentage of SNA bombers before they launch air-to-surface missiles (ASMs), we must get a large portion of the fighters in our Aircraft Carrier Battle Groups (CVBGs) into position to engage the bombers. This requires improved long-range surveillance. Our Integrated Tactical Surveillance System (ITSS) program is examining options to improve our tactical warning capabilities. The system eventually developed will integrate the data obtained by individual sensors with appropriate processing, correlation, and user elements to deliver a complete surveillance product to the battle group in time to allow effective reaction to a bomber raid before missile launch.

(2) Land-Based Forces for Sea-Lane Defense

We plan to make more use of land-based fighter aircraft to strengthen our defenses against the SNA threat in the North Atlantic. With support from AWACs and British air defense forces, these aircraft will significantly improve our ability to intercept SNA bombers attempting to attack naval forces and military shipping in the North Atlantic sea lanes. We are also studying the use of long-range strategic bombers to attack Soviet surface ships and naval targets ashore.

(3) AEGIS Program

Our five-year shipbuilding program includes procurement of 17 guided missile cruisers (CG-47 class ships) and one nuclear-powered guided missile cruiser (CGN-42) with the AEGIS weapon system. This will give us a total of 25 AEGIS ships by the early 1990s. These ships will substantially increase the air defense firepower of our

carrier battle groups against coordinated BACKFIRE raids and anti-ship cruise missile saturation attacks.

(4) Cruiser and Destroyer Programs

To replace the large numbers of CGs and guided missile destroyers (DDGs) that will be retired in the 1990s, we have initiated development of a new, less costly class of major surface combatant, the DDG-51. The DDG-51 class ships will be battle-group-capable escorts with anti-air, surface, and anti-submarine warfare capabilities. Their modified AEGIS system and vertical launchers will also permit them to operate independently, in protection of all types of Naval forces.

We are also modernizing our existing cruisers and destroyers to increase fleet air defense capability against the projected anti-ship cruise missile threat. Programs include conversion of TERRIER cruisers to carry the advanced STANDARD missile (SM-2) and the follow-on New Threat Upgrade Program for TERRIER and TARTAR cruisers and DDG-993 class destroyers.

(5) Close-In Defense Systems

Modernization of surface ship self-defense will continue in FY 1983 with procurement and installation of the PHALANX Close-In Weapon System (CIWS); installation of the NATO SEA SPARROW Missile (NSSM) system on carriers, destroyers (DD-963s), and mobile logistic support ships; and installation of the AN/SLQ-32 electronic warfare system. The improved SEA SPARROW missile (RIM-7M) is also programmed for retrofit in NSSMs installations.

AN/SLQ-32 electronic countermeasures equipment is now being installed on combatant ships. We are requesting funds to continue development of modifications that will increase its electronic warfare capabilities. We have also requested funds to develop countermeasures to help defeat anti-ship missiles.

	FY 1981 Actual Funding	FY 1982 Planned Funding	FY 1983 Prop'd Funding	FY 1984 Prop'd for Authorization
<u>Procurement</u> <u>of AEGIS-</u> <u>Armed Cruisers</u>				
\$ Millions	1,940.5	3,016.2	3,159.8	3,366.3

	FY 1981 Actual Funding	FY 1982 Planned Funding	FY 1983 Prop'd Funding	FY 1984 Prop'd for Authorization
<u>Development and Procurement of DDG-51 Class Ships and Combat Systems</u>				
Development:				
\$ Millions	35.3	70.9	138.6	117.6
Procurement:				
\$ Millions	--	--	12.4	128.1
<u>Procurement of STANDARD Missiles</u>				
\$ Millions	305.7	456.3	695.8	831.3
<u>Procurement of PHALANX Close-in Weapons System (CIWS)</u>				
\$ Millions	150.5	162.9	127.8	156.4
<u>Procurement of SEA SPARROW Missiles (RIM-7M)</u>				
\$ Millions	13.9	64.4	72.9	124.8

b. Anti-Submarine Warfare (ASW)

We are proceeding with programs that will strengthen our ASW forces. The recent introduction of new types of Soviet submarines--such as the Oscar SSGN, the Alpha SSN, and the Typhoon SSBN--together with the continued production of highly capable Victor-class SSNs and Delta-class SSBNs, leaves us little margin for complacency. Accordingly, we are pursuing several programs that will strengthen our capability to defeat the undersea threat.

(1) ASW Surveillance Systems

Fixed undersea surveillance systems are a key component of our anti-submarine defenses. We are continuing a long-term program to upgrade our shore facilities to take advantage of advancements in technology.

Mobile surveillance systems complement our fixed systems by providing the necessary flexibility to respond to changes in Soviet submarine deployment patterns and by extending coverage in remote ocean areas not presently monitored by fixed systems. They would also serve as an emergency backup in the event some of our fixed systems were incapacitated. The Congress has appropriated funds in FY 1984 for the first 12 TAGOS SURTASS ships. We are requesting funds in FY 1984 to construct an additional ship, an AGOS, incorporating advanced design features.

(2) Attack Submarine Programs

I am pleased to report that many of the problems that delayed the construction of our SSN-688 class submarines now appear to be behind us. During the past calendar year, seven new attack submarines joined the fleet. The prospects for continued improvement are good.

The Congress has already authorized construction of 39 SSN-688 class submarines. We seek authorization for two more in FY 1983 and for an additional 15 through FY 1987--more than double the number requested in last January's five-year plan.

We are also proceeding with a program to modify new construction SSN-688s to carry additional cruise missiles in vertical launch tubes. Because of the significant improvement this modification adds to the offensive capabilities of our submarines, we are requesting funds to begin retrofit of earlier 688-class submarines with this important change.

We are simultaneously pursuing related sensor and weapon programs that will improve our capability to detect and defeat enemy submarines. The Submarine Advanced Combat System (SUBACS) now in development will incorporate new sensor and weapon control systems that will maintain our superiority in this area over the next decade.

(3) Maritime Patrol Aircraft

Navy studies continue to show that maritime patrol aircraft will make an important contribution to our overall ASW efforts. While we have sufficient airframes to support the present force level until the early 1990s, the force contains a large number of older-model aircraft that are much less effective than the P-3Cs. However, to free resources for other, higher-priority needs and still modernize the P-3 force, we are proposing to reduce the U.S. production rate to six aircraft in FY 1983 and five per year during FY 1984-87. To achieve an economic production rate, we are encouraging our allies to provide firm purchase plans until our own needs support procurement at higher rates.

(4) Light Airborne Multi-Purpose System (LAMPS)

A recent program review approved initial limited production (Lot I) of the SH-60B (LAMPS MK III). After completion of an operational evaluation next spring, we will review the program again, to assess the system's readiness for full-scale production. We have funded procurement of the total LAMPS program of 204 helicopters in FY 1982-85.

The local ASW helicopter for the CV battle group is the SH-3H. A LAMPS MK III derivative is programmed to replace the SH-3H. Development has started, and procurement is planned for FY 1986.

(5) Surface Combatant Tactical Towed-Array Sonar

The long-range detection capability of the new tactical towed-array sonars (TACTAS) has substantially enhanced the ASW capability of our surface escorts. We are continuing to develop the SQR-19, an advanced design TACTAS, which, when compared with earlier models, will add significantly to our capability.

(6) Torpedo Programs

(a) Lightweight Torpedoes

The MK-46 is a conventional lightweight ASW torpedo designed for launch from surface ships and aircraft. To enhance its effectiveness against modern nuclear submarines, we are buying an improved version, the Near-Term Improvement Program (NEARTIP), which includes both new torpedoes and conversion kits to upgrade our older MK-46s. The FY 1983 budget also funds continued development of a new advanced lightweight torpedo (ALWT) to replace the MK-46 and to counter the projected threat beyond the 1980s.

(b) MK-48

We are continuing production of MK-48 torpedoes for our submarines. These highly capable weapons can be used against both submarines and surface ships and provide our forces with a significant qualitative advantage. Development is also continuing on the Advanced Capability (ADCAP) modification, which will ensure MK-48 effectiveness through the remainder of this century.

(c) ASW Standoff Weapon

The Common ASW Standoff Weapon (CASW/SOW) will complement the MK-48 torpedo and allow our submarines and surface combatants to attack enemy submarines outside effective torpedo range. We plan to deploy this weapon on surface ships to replace the aging, shorter-range anti-submarine rocket (ASROC) system.

	<u>FY 1981</u> <u>Actual</u> <u>Funding</u>	<u>FY 1982</u> <u>Planned</u> <u>Funding</u>	<u>FY 1983</u> <u>Prop'd</u> <u>Funding</u>	<u>FY 1984</u> <u>Prop'd for</u> <u>Authorization</u>
<u>Procurement</u> <u>of TAGOS</u> <u>SURTASS Ships</u>				
\$ Millions	185.0	156.2	6.0	5.4
<u>Procurement</u> <u>of SSN-688</u> <u>Class Nuclear</u> <u>Attack Sub-</u> <u>marines</u>				
\$ Millions	1,121.9	1,592.6	1,732.4	2,056.9
<u>Procurement</u> <u>of P-3 Patrol</u> <u>Aircraft</u> <u>(including</u> <u>HARPOON back-</u> <u>fits)</u>				
\$ Millions	308.5	441.0	341.8	300.0
<u>Procurement</u> <u>of SH-60B Light</u> <u>Multi-Purpose</u> <u>Systems</u>				
\$ Millions	105.0	806.7	212.0	1,408.9
<u>Procurement of</u> <u>Surface Ship</u> <u>Towed-Array</u> <u>Sonar</u>				
\$ Millions	--	7.6	77.3	153.9
<u>Acquisition</u> <u>and Conversion</u> <u>of MK-46 ASW</u> <u>Torpedoes</u>				
\$ Millions	63.4	151.0	169.6	262.9
<u>Development</u> <u>of Advanced</u> <u>Lightweight</u> <u>Torpedo (ALWT)</u>				
\$ Millions	98.9	105.4	115.1	145.4

	FY 1981 Actual Funding	FY 1982 Planned Funding	FY 1983 Prop'd Funding	FY 1984 Prop'd for Authorization
<u>Procurement of MK-48 ASW Torpedoes and ADCAP Modifi- cation Kits</u>	\$ Millions 98.0	121.2	125.5	136.4
<u>Development of Common ASW Standoff Weapon (CASW/SOW)</u>	\$ Millions 19.0	39.6	42.0	58.2

c. Crisis Management and Strike Forces

Our FY 1983-87 program funds several initiatives to improve the offensive capabilities of our naval forces. We are taking steps both to improve the firepower of our ships and to distribute our offensive striking power to a larger number of ships--thus reducing our dependence on any individual unit and complicating the problems faced by a potential enemy. Major initiatives include the construction of two new large-deck nuclear aircraft carriers, a major construction program to replace our aging amphibious ships, the reactivation of four IOWA class battleships, and accelerated procurement of TOMAHAWK and HARPOON missiles.

(1) Carrier Forces

Our five-year shipbuilding program continues construction of large-deck nuclear-powered aircraft carriers (CVN) of the highly successful Nimitz class. We have decided to request authorization of two CVNs in FY 1983--CVN-72 and CVN-73--in order to accelerate deliveries. This strategy will permit purchase of two ship sets of equipment and serial fabrication of major subassemblies. The Navy believes this approach will strengthen our vendor/contractor industrial base and accelerate the delivery of each CVN by as much as 21 months.

(2) Amphibious Forces

We are undertaking a major amphibious construction program--including procurement of three new classes of ships--to replace aging units scheduled to retire in the 1990s. New ships are also required to maintain our amphibious lift capability as the introduction of new equipment into the Marine Corps inventory raises Marine force embarkation requirements, particularly for helicopter spots and cargo space. At the same time, we are assessing our amphibious lift objectives in light of increased demands for rapidly deployable forces.

(a) Amphibious Ships

The Landing Ship Dock (LSD-41) is the only amphibious ship currently in production. It will be able to carry at least four of our new high-speed Landing Craft Air Cushion (LCAC), which will provide an improved ship-to-shore capability, or a mix of conventional landing craft. The initial LSD-41s will replace the eight LSD-28 ships scheduled for retirement in the mid-1980s. Eight ships are programmed in our five-year shipbuilding plan.

The General Purpose Amphibious Assault Ship (LHD-1), scheduled for procurement in FY 1984, represents a major new amphibious lift initiative. The two LHD-1 class ships requested in our five year plan will provide a net increase in amphibious lift capabilities. The seven helicopter landing platform ships (LPHs) now scheduled for retirement in the mid-1990s will eventually be replaced by LHDs. The LHD-1 will be based on the design of the existing LHA Amphibious Assault Ship, giving it a displacement of about 40,000 tons. Design changes from the LHA baseline will emphasize increased capability to carry LCACs and to support vertical/short take-off and landing (V/STOL) aircraft. Improved V/STOL support features are being examined to diversify and broaden the offensive aviation capabilities of the fleet.

The Landing Platform Dock (LPDX) is a notional ship, envisioned as a replacement for existing LPD-class ships. Similar in size to the LSD-41, the LPDX will carry a mixed load of troops, vehicles, cargo, LCACs, and embarked helicopters. Current programming assumes long-lead funding in FY 1987 to support authorization of the lead ship in FY 1988.

(b) Landing Craft

The LCAC program will replace existing conventional landing craft with air-cushioned craft capable of transporting troops and vehicles, including tanks, at speeds in excess of 40 knots. Authorization for three LCACs is requested in FY 1983. Progress in this program will allow us to proceed to full-rate production a year earlier than previously planned, resulting in the procurement of 12 more craft over the program period than were requested in last January's five-year plan.

(3) Battleships

Reactivation of four IOWA class battleships will allow a rapid expansion of surface combatant battle groups. Armed with TOMAHAWK and HARPOON missiles as well as 16-inch guns, these ships will make a formidable addition to our active forces.

(4) TOMAHAWK Cruise Missiles

We are significantly increasing procurement of TOMAHAWK missiles. Our program, compared with last January's plan, funds over 800 more missiles through FY

1986. This weapon, to be procured in both land-attack and anti-ship versions, will greatly enhance the long-range striking power of our submarines and surface ships.

The missiles themselves would be of little value without launch platforms. We have already touched upon the increase in submarine procurement and the start of a program to retrofit the vertical launch system (VLS) bow capability on earlier SSN-688 class ships. In addition, vertical launch systems will be installed on all but the first five new construction CG-47 class AEGIS cruisers, and we have initiated a program to retrofit vertical launch systems on DD-963 class ships, giving us the capability to put large numbers of cruise and anti-air warfare missiles at sea. Our reactivated battleships will also be equipped with TOMAHAWKs in Armored Box Launchers (ABL). The net result will be a tremendous increase in the striking power of our forces.

(5) HARPOON

In keeping with our policy of improving the offensive capabilities of our forces, we have decided to continue HARPOON production beyond 1984. Our program will procure about 1,000 more missiles in FY 1982-86 than were requested in last January's five-year plan.

	FY 1981 Actual <u>Funding</u>	FY 1982 Planned <u>Funding</u>	FY 1983 Prop'd <u>Funding</u>	FY 1984 Prop'd for <u>Authorization</u>
<u>Procurement</u> <u>of Aircraft</u> <u>Carriers (CVN)</u>				
\$ Millions	149.1	564.2	6,840.8	30.2
<u>Procurement</u> <u>of LSD-41</u>				
\$ Millions	387.7	307.2	421.0	484.7
<u>Procurement</u> <u>of LHD-1</u>				
\$ Millions	-0-	45.0	55.0	1,328.1
<u>Development</u> <u>and Procure-</u> <u>ment of</u> <u>Landing Craft</u> <u>Air Cushion</u> <u>(LCAC)</u>				
Procurement:				
\$ Millions	42.0	98.4	66.2	144.6
Development:				
\$ Millions	5.9	5.0	--	--

	FY 1981 Actual Funding	FY 1982 Planned Funding	FY 1983 Prop'd Funding	FY 1984 Prop'd for Authorization
<u>Reactivation of Battleships</u>				
Procurement: \$ Millions	89.0	325.0	445.4	503.0
Development: \$ Millions	3.0	4.0	--	--
<u>Procurement of TOMAHAWK Missiles</u>				
\$ Millions	190.0	236.3	308.4	620.0
<u>DD-963 VLS Backfit</u>				
\$ Millions	-0-	65.8	40.8	112.8
<u>Procurement of HARPOON Anti-Ship Missiles</u>				
\$ Millions	219.2	234.1	266.7	354.2

d. Escort and Support Forces

Projected retirements of surface combatants and mine warfare ships require an aggressive shipbuilding program to prevent a serious reduction in our force levels in the early 1990s. Our shipbuilding program contains a number of initiatives to start us on the path to recovery, including reactivation of four battleships and construction of DDG-51 and DD-963 class destroyers, CG-47 class cruisers, FFG-7 guided missile frigates, and new ships for our mine warfare forces.

Our aging underway replenishment force must also be modernized and expanded. Our five-year shipbuilding program adds 18 more underway replenishment ships than were funded in last January's plan. We will pursue a balanced program that not only increases our combatant force but ensures that it is adequately supported.

(1) Guided Missile Frigates

We have programmed funds in FY 1983 to procure two FFG-7s. We plan to continue construction of this useful and relatively inexpensive ship to meet our escort needs for other than carrier battle groups. Earlier ships of this class in a LAMPS I/TACTAS configuration will be transferred to the Reserve force. This will provide a significant increase in ASW forces for wartime mobilization.

(2) Destroyers

Three additional DD-963 class ships are included in the five-year shipbuilding plan in anticipation of increased carrier force levels and attendant greater ASW force requirements. We believe additional construction of these highly efficient ships is a reasonable and cost-effective way to provide ASW capability for battle group and other surface combatant ASW duties such as convoy escort.

(3) Multi-Product Ships

Multi-product ships (AOE/AOR) carry POL, ammunition, and stores for carrier battle groups. Our goal is to have one multi-product ship operate as a station ship for each carrier. Beginning in FY 1985, we will procure four additional multi-product ships.

(4) Fleet Oilers

After reviewing our needs, we have decided to increase construction of fleet oilers (T-AOs). We now plan to buy 19 of these ships. These ships will do much toward meeting the future needs of our forces. Their addition, together with the retirement of older ships, some of which are approaching 40 years of service life, will reduce the average age of our oilers from about 29 years at the end of FY 1982 to about 9 years at the end of FY 1990. They will be manned with Military Sealift Command (MSC) personnel to improve their utilization rate while minimizing demands on active-duty personnel.

(5) Salvage Ships

We are requesting funds in FY 1983 for the fourth of five salvage ships (ARS). These ships, incorporating improved towing and salvage capabilities, will enable us to provide continued support to forward-deployed forces.

(6) Fleet Tenders

To alleviate the projected shortfall in surface fleet tenders in the late 1980s, we have added two destroyer tenders (AD) to our shipbuilding program--one in FY 1986 and the other in FY 1987.

	FY 1981 Actual <u>Funding</u>	FY 1982 Planned <u>Funding</u>	FY 1983 Prop'd <u>Funding</u>	FY 1984 Prop'd for <u>Authorization</u>
<u>Procurement</u> <u>of Guided</u> <u>Missile Fri-</u> <u>gates (FFG-7)</u>				
\$ Millions	1,602.0	1,001.6	761.6	846.1

	FY 1981 Actual <u>Funding</u>	FY 1982 Planned <u>Funding</u>	FY 1983 Prop'd <u>Funding</u>	FY 1984 Prop'd for <u>Authorization</u>
<u>Procurement</u> <u>of Fleet</u> <u>Oilers</u>				
\$ Millions	--	257.1	321.8	531.1
<u>Procurement</u> <u>of Fleet</u> <u>Support Ships</u>				
\$ Millions	93.0	134.2	88.6	74.8
<u>Conversion</u> <u>of Ships for</u> <u>Fleet Support</u>				
\$ Millions	45.3	411.1	327.3	57.4

(7) Mine Warfare Forces

The Soviet Union maintains a large inventory of mines, including a significant number of advanced types. Our fleet of 25 aging oceangoing mine-sweepers (MSOs), all but three of which are assigned to the Naval Reserve Forces, is only marginally effective against this threat. We also have fewer airborne mine counter-measures helicopters than our objectives require. We are programming to make needed improvements in these forces, as are our allies.

We are also taking steps to improve our offensive mining capability by developing and procuring several new types of mines. These relatively low-cost weapons will provide an effective means of denying the use of key areas to hostile forces.

(a) Mine Countermeasure
(MCM) Ships

New MCM ships, incorporating improved minesweeping, hunting, and neutralization systems, will provide a much-needed capability to deal more effectively with the Soviet deep-water threat. We have accelerated the procurement schedule and plan to buy 13 MCM ships through FY 1985, 4 of which are funded in FY 1983. A new class of smaller mine hunters, the MSH-1 class, will augment the MCM ships during initial clearance and harbor breakout operations. Authorization of the lead ship is scheduled for FY 1984. Our five-year program contains 11 MSHs, with a total of 17 ships planned.

(b) Mine Countermeasure (MCM)
Helicopters

We are developing a mine countermeasures conversion kit for the cargo-configured CH-53E. This effort will lead to authorization of new mine countermeasures helicopters in about two years. In addition, we are developing several new Airborne Mine Countermeasure (AMCM) systems that will provide enhanced capabilities for hunting and sweeping mines.

(c) Mines

We are continuing development of three types of mines that we believe will contribute significantly to our capabilities in this much-neglected area. The CAPTOR ASW mine was procured in small quantities in the past while development and testing proceeded. Recent modifications have corrected past performance deficiencies. Accordingly, we are requesting funds in FY 1983 to increase CAPTOR production. Two more modest efforts, the QUICKSTRIKE and the Submarine-Launched Mobile Mine (SLMM), will also be continued.

	<u>FY 1981</u> <u>Actual</u> <u>Funding</u>	<u>FY 1982</u> <u>Planned</u> <u>Funding</u>	<u>FY 1983</u> <u>Prop'd</u> <u>Funding</u>	<u>FY 1984</u> <u>Prop'd for</u> <u>Authorization</u>
<u>Procurement</u> <u>of Mine</u> <u>counter-</u> <u>measure</u> <u>Ships</u>				
\$ Millions	--	117.9	373.1	345.7
<u>Development</u> <u>and Procure-</u> <u>ment of</u> <u>QUICKSTRIKE</u> <u>Mines</u>				
Procurement:				
\$ Millions	9.6	21.1	30.9	45.3
Development:				
\$ Millions	7.4	6.9	9.7	7.5
<u>Procurement</u> <u>of Submarine-</u> <u>Launched Mobile</u> <u>Mines (SLMM)</u>				
\$ Millions	--	11.5	24.2	28.5

	FY 1981 Actual Funding	FY 1982 Planned Funding	FY 1983 Prop'd Funding	FY 1984 Prop'd for Authorization
<u>Development and Procurement of CAPTOR Mines</u>				
Procurement:				
\$ Millions	85.8	123.4	160.2	194.9
Development:				
\$ Millions	6.4	2.9	1.5	1.1

e. Command, Control, Communications and Intelligence (C3I)

We are proceeding with incremental changes to the Navy Command and Control System to ensure that it is sufficiently capable and responsive to the needs of our operational commanders. We are requesting funds to continue development of a system that is as survivable as the Naval forces it supports and balanced in a manner to maximize warfighting capabilities for all Naval missions. Installation of the Tactical Flag Command Center will continue, as will testing of enhancements to existing capabilities.

f. Force Readiness

Readiness and sustainability of Naval forces has been given priority consideration in the preparation of this year's budget request. The Navy routinely keeps about 25 to 30 percent of its ships forward deployed at a high state of readiness. The increased tempo of operations in the Indian Ocean and elsewhere has stretched our Naval forces thinner than at any time since the late 1940s. There is no margin to take on additional peacetime commitments without extending already hard-pressed fleet personnel and affecting essential maintenance.

(1) Materiel Readiness

Our new ships are more capable, but also more complex. We have requested adequate funding for each maintenance level to sustain current fleet materiel readiness. A prudent backlog of ship overhauls remains--primarily because of increased operational commitments. We are continuing programs to improve organizational maintenance at the shipboard and intermediate maintenance levels.

We plan to continue investing in shipyard modernization and other Naval shipyard productivity improvements over the next five years. These two initiatives will contribute to increased readiness and ship availability in the long term.

(2) Personnel Readiness

The Navy's most serious readiness problems are personnel related. Additional resources have been programmed to improve recruiting of high school graduates, provide career reenlistment incentives, and increase the career petty officer content of the force. Compensation remains the primary factor affecting retention, although family separation is also a key consideration. The increases in pay and allowances in FY 1981 and FY 1982 demonstrated a recognition of the need to pay our sailors fair and competitive wages. This year we will request funds to maintain pay and allowances at that competitive level.

TABLE III.B.2

FY 1983-87 Shipbuilding Program
(Fiscal Year)

TYPE OF SHIP	<u>1/</u>						FY 83-87 Five Year Total
	<u>82</u>	<u>83</u>	<u>84</u>	<u>85</u>	<u>86</u>	<u>87</u>	
TRIDENT (Ballistic Missile Submarine)	-	2	1	1	1	1	6
SSN-688 (Attack Submarine)	2	2	3	4	4	4	17
CVN (Aircraft Carrier-Nuclear)	-	2	-	-	-	-	2
CV (Aircraft Carrier) SLEP 2/	-	1	-	1	-	1	3
CG-47 (Guided Missile Cruiser)	3	3	3	3	4	4	17
CG-42 (Nuclear Guided Missile Cruiser)	-	-	-	-	-	1	1
DDG-51 (Guided Missile Destroyer)	-	-	-	1	-	3	4
DD (Destroyer)	-	-	-	-	2	1	3
BB (Battleship) Reactivation	1	1	1	1	-	-	3
FFG-7 (Guided Missile Frigate)	3	2	2	2	3	3	12
MCM (Mine Countermeasure Ship)	1	4	4	5	-	-	13
MSH (Mine Countermeasure Ship)	-	-	1	-	5	5	11
LSD-41 (Landing Ship Dock)	1	1	1	2	2	2	8
LHD-1 (Amphibious Ship)	-	-	1	-	-	1	2
AOE (Multi-Purpose Stores Ship)	-	-	-	1	1	2	4
AE (Ammunition Ship)	-	-	-	1	2	1	4
ARS (Salvage Ship)	2	1	1	-	-	-	2
AD (Destroyer Tender)	-	-	-	-	1	1	2
T-AO (Oiler)	1	1	3	4	4	6	18
T-AGS (FEM Support Ship) Conversion	-	-	-	2	-	-	2
T-AK (Cargo Ship) Conversion	-	-	-	1	-	-	1
T-ARC (Cable Ship)	-	-	-	-	1	-	1
T-AGM (Range Instrumentation Ship) Conversion	-	-	-	-	1	-	1
T-AGOS/AGOS (SURTASS)	4	-	1	-	2	3	6
T-AKRX (SL-7) Conversion 3/	4	4	-	-	-	-	4
T-AFS (Stores Ship) Conversion	2	-	-	-	-	-	-
T-AH (Conversion)	-	1	1	-	-	-	2
New Construction Ships	17	18	21	24	32	38	133
Conversions/SLEPs/ Reactivations	7	7	2	5	1	1	16

1/ Shown for information to reflect changed baseline from Carter program.

2/ SLEP - Service Life Extension Program.

3/ Acquisition of eight T-AKRXs will be completed in FY 1982.

C. TACTICAL AIR FORCES

1. Introduction

The tactical air forces of the United States, consisting of Air Force, Navy, and Marine Corps units, are part of a combined-arms warfighting capability that we maintain in support of our national security objectives. These forces--equipped with fighter, attack, and combat support aircraft--perform close air support, counter-air, nuclear strike, and interdiction missions. In addition, they perform various combat support roles, including airborne warning and control; tactical reconnaissance; electronic warfare (EW); command, control, and communications countermeasures (C3CM); defense suppression; and special operations.

a. Force Structure

The current deployment of U.S. tactical air forces is shown in Chart III.C.1.

(1) U.S. Air Force Tactical Air Forces

The Air Force fighter force structure consists of 24 active wing equivalents and the equivalent of nearly 12 Air National Guard (ANG) and Air Force Reserve (AF Res) wings. Each wing typically contains three squadrons of 24 aircraft each. Combat support units are generally grouped into squadrons of 18 to 24 aircraft. We expect to have the equivalent of 26 fully equipped active wings and 14 Air National Guard and reserve wings by FY 1986.

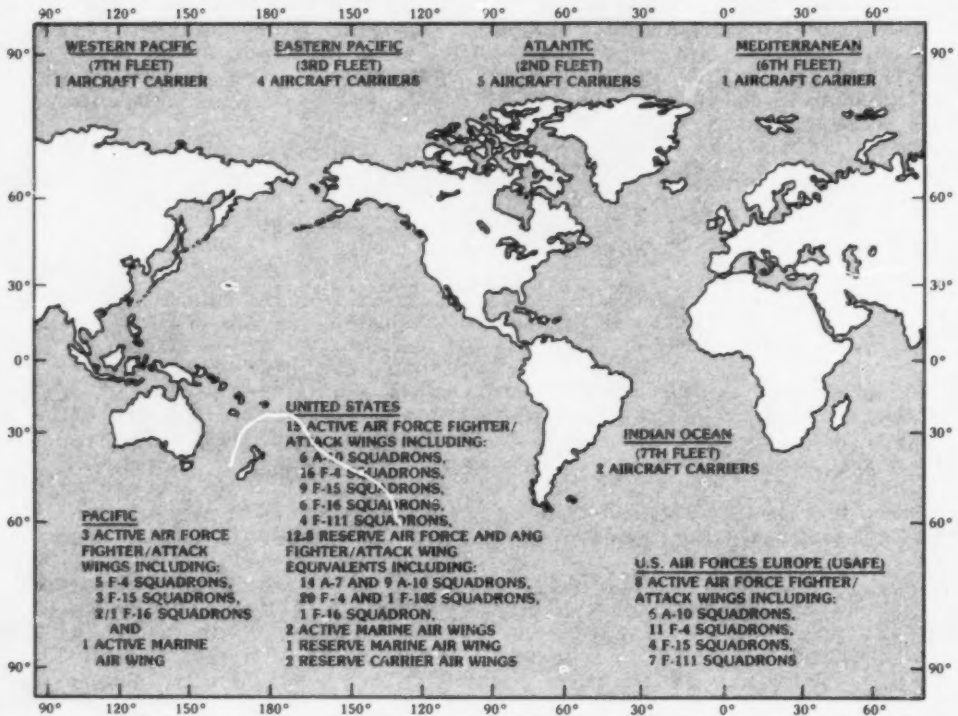
In addition to fighter forces, the active and reserve components of the Air Force operate the following types and numbers of special purpose tactical squadrons: EW (2), Defense Suppression (5), Reconnaissance (8), Tactical Command and Control (11), and Special Operations (9).

(2) U.S. Navy and Marine Corps Tactical Air Forces

Unlike Air Force wings, which generally consist of only one type of aircraft, Navy and Marine Corps air wings are task oriented and include a mix of aircraft types.

CHART III.C.1

DEPLOYMENT OF U.S. TACTICAL AIR FORCES



A typical active Navy carrier air wing consists of the following types and numbers of aircraft:

<u>Aircraft Type</u>	<u>Function</u>	<u>Squadrons</u>	<u>Aircraft</u>
F-4, F-14 (TARPS)	Fighter (Reconnaissance)	2	24
A-7, F/A-18	Light Attack	2	24
A-6, KA-6D	Medium Attack, Tanker	1	14
S-3A	ASW (Fixed Wing)	1	10
SH-3H	ASW (Rotary Wing)	1	6
EA-6B	Electronic Warfare	1	4
E-2C	Airborne Early Warning	<u>1</u>	<u>4</u>
TOTAL		9	86

An active Marine Corps air wing typically consists of the following elements:

<u>Aircraft Type</u>	<u>Function</u>	<u>Squadrons</u>	<u>Aircraft</u>
F-4, F/A-18	Fighter/Attack	4	48
A-4, AV-8A/B/C	Light Attack	2-3	38-57
A-6	Medium Attack	1-2	10-20
KC-130	Tanker/Transport	1	12
EA-6B	Electronic Warfare	1	4
RF-4	Reconnaissance	1	7
OV-10	Observation	1	12
AH-1	Attack Helicopter	1	24
CH-53, CH-46, UH-1	Transport/Utility Helicopters	<u>6-7</u>	<u>131</u>
TOTAL		18-21	286-315

Our five-year program funds two additional active Navy carrier air wings--one in FY 1983 and the other in FY 1987--bringing the total to 14 active wings

by the end of the program period. We will also maintain three active Marine Corps air wings, two Navy reserve wings, and one Marine reserve wing throughout the program period.

2. FY 1983-87 Tactical Air Programs

Our five-year program places major emphasis on the following areas: increasing the combat readiness and sustainability of our tactical air forces; modernizing their active and reserve components; enhancing electronic combat and C³ capabilities; and improving target acquisition, surveillance, warning, and reconnaissance capabilities.

a. Increasing Combat Readiness

The combat readiness of our tactical air forces has fallen below desired levels, as measured by the low number of aircraft units defined as fully combat ready. Combat-ready definitions include equipment readiness, equipment and supplies on hand, personnel, training, and unit commander judgment, and reflect the basic complexity of our modern tactical aircraft. Our first priority in the FY 1983-87 program is to improve both near-term and long-term combat readiness and sustainability. We will continue to fund initiatives, begun in the FY 1981 Budget Supplemental and FY 1982 Budget Amendment, to eliminate peacetime operating spares deficits, reduce service maintenance backlogs, and increase war reserve stocks (spare parts, ammunition, and support equipment).

Total flying hours are an important aggregate measure of force training and readiness levels. An increase in tactical flying hours translates directly into increased aircrew combat capability. In addition to funding increases in flying hours, we are continuing to emphasize realism in training. Instrumented Air Combat Maneuvering Ranges, now coming into fairly widespread use, offer U.S. and Allied aircrews a unique training aid. Air Force, Navy, and Marine Corps active and reserve units regularly participate in the large-scale "Red Flag" exercises held at Nellis Air Force Base, Nevada; the "Cope Thunder" exercises conducted at Clark Air Force Base, Philippines; and the combined-arms, live-fire exercises at the Marine Corps Air Station, Yuma, Arizona.

U.S. tactical aircrews continue to be rated as superior to Warsaw Pact aviators, in part because of their significant advantage in average flying time per crew member. Further increases in flight time for our aircrews will be necessary, however, if they are to achieve their full combat potential.

To improve combat readiness over the longer term, we must direct our technology toward obtaining weapon systems that can be procured in greater quantities, can be supported adequately in the field, can be more easily maintained, and will be more reliable and available for both peacetime and wartime uses.

b. Improving the Active, Air National Guard, and Reserve Tactical Air Components of the Air Force

We have intensified our efforts to improve the capabilities of our tactical air forces. Although readiness continues to be our highest priority, we will actively pursue initiatives to improve force deployability and sustainability. The resources we have applied to these areas, together with a continuing modernization program and a modest growth in force size, will significantly increase our readiness and force projection capabilities by FY 1987. Changes in the active tactical air force structure are shown in Chart III.C.2.

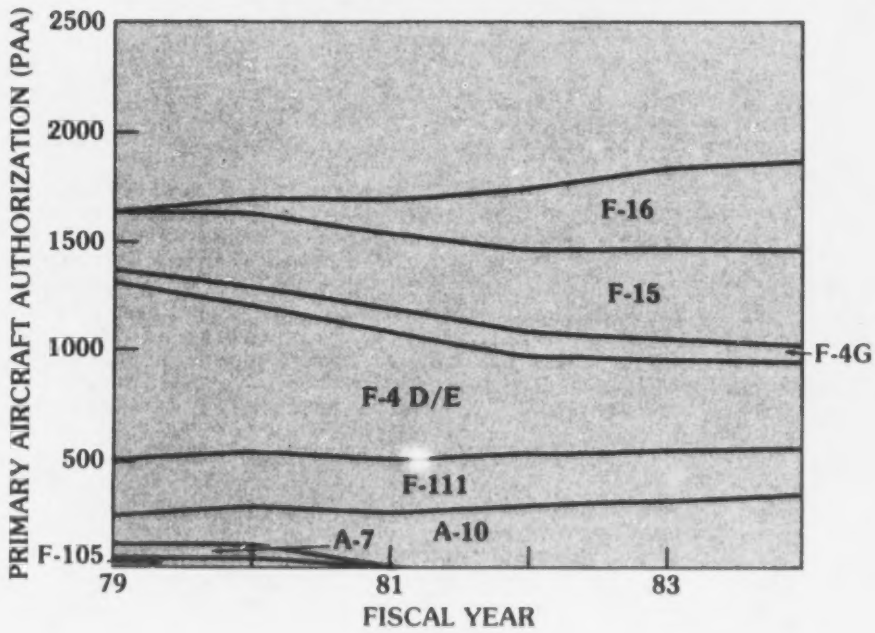
To reduce the depot maintenance backlog, we have provided additional funds for Depot Purchased Equipment Maintenance (DPEM). We have also increased the manning level for the Air Force Logistics Command (AFLC). These actions will improve our replacement item processing and repair capabilities and enhance AFLC's capability to respond to a wartime surge. In addition, we have funded maintenance manpower authorization increases for the tactical fighter units. These additional billets will support wartime sortie rate requirements during the initial days of conflict as well as tactical force modernization requirements.

Our five-year program gives deployability as high a priority as readiness. In this regard, we have programmed additional funds to begin construction of facilities to preposition aircraft support equipment, including materiel handling equipment and flight-line support vehicles, in Europe and Southwest Asia and to increase munitions and POL storage capabilities in NATO.

Sustainability, which has been the prime target for funding reductions in recent years, has been given a high priority in our five-year program. Our shift in policy to plan for the possibility of a global, extended war with the Soviets requires accelerated improvement in this area. Therefore, we have funded War Readiness Supply Kits (WRSK), Base Level Supply Sufficiency (BLSS), War Reserve Materiel (WRM) munitions, and Other War Reserve Materiel (OWRM) requirements to sustain our tactical air forces in the European and Korean theaters and our rapid deployment forces (excluding POL) during initial periods of conflict.

The planned fighter force modernization program encompasses both the active and reserve tactical fighter and air defense forces. We have programmed funds in FY 1983 to procure 20 A-10s, 42 F-15s, and 120 F-16s. The F-15 procurement will allow retirement of additional aircraft from the active CONUS air defense forces; the F-16 procurement will permit continued modernization and growth of the active and reserve forces. The F-16s are slated primarily to replace F-4s in the active force; the F-4s, in turn, will be used to replace older aircraft, such as early model F-4s, in the Air National Guard and Air Force Reserve. One Air National Guard unit in FY 1983 and one Air Force

CHART III.C.2
**U.S. AIR FORCE
ACTIVE TACTICAL AIRCRAFT**



Reserve unit in FY 1984 will receive F-16s. By FY 1984, 22 percent of the fighter aircraft in our reserve forces will consist of A-10s and F-16s. Changes in the Air Force Reserve and Air National Guard force structure are shown in Chart III.C.3.

We have programmed funds to procure fighter aircraft at more efficient and economical rates. By FY 1985, F-15 procurement is projected to reach 96 aircraft per year; by FY 1986, F-16 procurement will rise to 180 aircraft per year. We also intend to continue procurement of both of these aircraft beyond FY 1987. The F-15 and F-16 will provide satisfactory air-to-air performance in meeting the Soviet aircraft threat of the 1980s. In evaluating our longer-term fighter force needs, we will consider modification of current aircraft along with new aircraft designs.

By FY 1986, we will fully equip 40 tactical fighter wings (26 active and 14 ANG and AF Res wings). We tentatively plan to add four more tactical fighter wings in the out years, while continuing to modernize the current force.

Major elements of the Air Force's modernization program are discussed below:

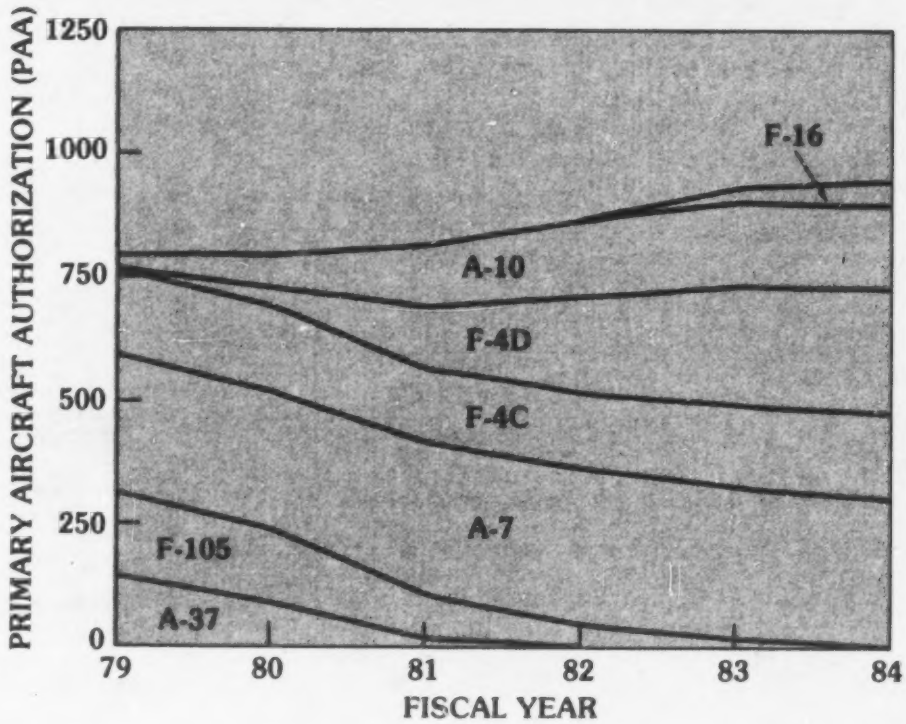
(1) F-15 (EAGLE)--The F-15 is the Air Force's all-weather, air superiority fighter. The original procurement program of 729 aircraft has been increased to 1,107 aircraft by FY 1987, and we tentatively project continued acquisition of the aircraft into the early 1990s. Development funds are programmed for an air-to-surface derivative of the F-15 that will enhance its range, payload, and delivery capabilities.

(2) F-16 (FIGHTING FALCON)--The F-16 is a multi-role fighter. We plan to procure 120 F-16s in FY 1983 as part of a 480-aircraft multi-year procurement program (FY 1982-85), and to increase production to 180 aircraft per year in 1986 and beyond. Development funds are provided in FY 1983 for a cranked arrow wing version that will expand the F-16's range and stores capability. We plan to conduct a competition between the F-15 and F-16 air-to-surface derivatives, and may choose to pursue only one of them.

(3) LANTIRN--The LANTIRN system will provide the F-16 and A-10 with night/under-the-weather navigation capability and will increase their conventional, laser-guided bomb (LGB), and MAVERICK weapons delivery capability.

(4) IIR MAVERICK Anti-Armor Air-to-Ground Missile--An updated version of the current TV-guided MAVERICK, the IIR MAVERICK uses an imaging infrared seeker for guidance, expanding its capability in the night attack role.

CHART III.C.3
**U.S. AIR FORCE RESERVE
AND AIR NATIONAL GUARD AIRCRAFT**



(5) Advanced Medium-Range Air-to-Air Missile (AMRAAM)--This new, all-weather, "fire-and-forget" air-to-air missile can use its own radar to home autonomously on a target. It is being developed for use by both the Air Force and the Navy.

(6) AIM-7M (SPARROW)--An all-weather, semi-active, radar-guided, air-to-air missile, the AIM-7M has greater electronic countermeasures resistance and look-down/shoot-down capabilities than the "F" model. Procurement of the missile began in FY 1980.

(7) AIM-9M (SIDEWINDER)--An infrared-guided air-to-air missile, the AIM-9M incorporates improved background discrimination and countermeasure capabilities.

(8) 30mm Anti-Armor Aircraft Guns--A program to procure 299 30mm gun pods was initiated in FY 1980. These pods will provide additional anti-armor capability for the F-4 and A-7, plus growth potential for other aircraft.

(9) Wide Area Anti-Armor Munition (WAAM)--Development funds are programmed for a new family of advanced anti-armor munitions, ranging in type from unguided cluster weapons to terminally guided dispensed submunitions.

(10) Conventional Standoff Weapon--Funding is provided in FY 1983 for full-scale development of a new standoff tactical guided weapon that will exploit Precision Location Strike System (PLSS) information.

(11) Tactical Aircraft Modifications--This account funds aircraft modifications to correct problems identified during development and operational use, including changes to enhance the capability of existing aircraft, improve their reliability and maintainability, incorporate operational and safety modifications, and extend their service life. Significant items in the current program include the Inertial Navigation System for the A-10, a low smoke and radar warning receiver for the F-4, and the final procurement of kits for the EF-111 conversion.

	<u>FY 1981</u> <u>Actual</u> <u>Funding</u>	<u>FY 1982</u> <u>Planned</u> <u>Funding</u>	<u>FY 1983</u> <u>Prop'd</u> <u>Funding</u>	<u>FY 1984</u> <u>Prop'd for</u> <u>Authorization</u>
<u>F-15 (EAGLE)</u>				
Procurement:				
Quantity	42	36	42	60
\$ Millions	1,103.3	1,175.0	1,682.3	2,156.7
Development:				
\$ Millions	11.0	32.3	125.3	127.3

	FY 1981 Actual Funding	FY 1982 Planned Funding	FY 1983 Prop'd Funding	FY 1984 Prop'd for Authorization
<u>F-16 (FIGHTING FALCON)</u>				
Procurement:				
Quantity	180	120	120	120
\$ Millions	1,941.9	2,273.0	2,225.9	2,108.7
Development:				
\$ Millions	41.9	57.3	86.1	220.2
<u>LANTIRN</u>				
Procurement:				
\$ Millions	1.0	5.0	15.7	25.4
Development:				
\$ Millions	57.2	90.4	108.2	97.7
<u>IIR MAVERICK</u> <u>Anti-Armor</u> <u>Air-to-Ground</u> <u>Missile</u>				
Procurement:				
Quantity	--	490	2,560	4,600
\$ Millions	--	235.2	353.1	468.7
Development:				
\$ Millions	46.8	24.9	5.4	.1
<u>Advanced</u> <u>Medium Range</u> <u>Air-to-Air</u> <u>Missile</u>				
Development:				
\$ Millions	45.4	144.4	212.3	199.6
<u>AIM-7M</u> <u>(SPARROW)</u>				
Procurement:				
Quantity	1,050	1,025	1,300	2,075
\$ Millions	185.2	222.2	208.3	305.3
<u>AIM-9M</u> <u>(SIDEWINDER)</u>				
Procurement:				
Quantity	1,280	1,800	1,920	1,700
\$ Millions	105.9	138.0	115.7	102.1

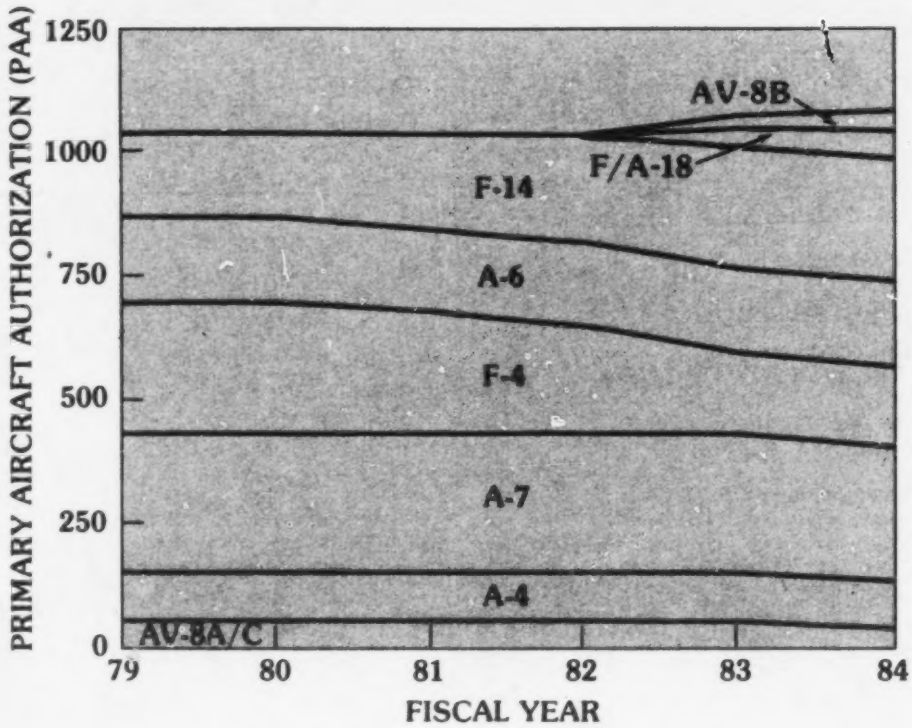
	FY 1981 Actual Funding	FY 1982 Planned Funding	FY 1983 Prop'd Funding	FY 1984 Prop'd for Authorization
<u>30mm Anti-Armor Air-craft Guns</u>				
Procurement:				
Quantity	40	104	75	80
\$ Millions	32.3	41.7	29.5	29.4
Development:				
\$ Millions	13.6	11.8	1.0	--
<u>Wide Area Anti-Armor Munition</u>				
Development:				
\$ Millions	52.8	75.9	26.5	45.7
<u>Conventional Standoff Weapon</u>				
Development:				
\$ Millions	--	--	38.9	65.7
<u>Tactical Aircraft Modifications</u>				
Modifications:				
\$ Millions	578.5	621.4	650.5	760.3

c. Improving the Active and Reserve Tactical Air Components of the Navy

Our FY 1983-87 defense program marks significant improvements in both our Navy and Marine Corps warfighting capabilities. Committed to achieving and sustaining U.S. maritime superiority, our aircraft procurement plan carefully balances near- and long-term requirements. Charts III.C.4 and III.C.5 show the increases in our active and reserve fighter/attack force structure resulting from our program. Over the next five years, we plan to buy 964 Navy and Marine Corps tactical fighter and attack aircraft. This translates into an average of 193 aircraft per year--an 88 percent increase over the average annual procurement rate during the past decade. This procurement schedule will allow us to reach our goal of 14 active carrier air wings by the end of the program period. We plan to commission the 13th wing in FY 1983 and the 14th in FY 1987.

The 552 F/A-18s that are programmed during the FY 1983-87 planning period represent over 50 percent

CHART III.C.4
**DEPARTMENT OF THE NAVY
ACTIVE FIGHTER/ATTACK AIRCRAFT**



of the Navy tactical aircraft funded. To ensure economical production rates, we have programmed funds to reach an annual procurement rate of 132 aircraft by FY 1986. The F/A-18 will be introduced into Marine fighter/attack and Navy light attack squadrons in FY 1983. When this program is completed in the 1990s, all 28 Navy light attack squadrons and all 12 Marine Corps fighter/attack squadrons, as well as four Navy fighter squadrons, will be equipped with the F/A-18. Our large deck carriers will be equipped with an all F-14 fighter force.

Our procurement program will allow the Navy to arrest the aging of its active fighter and light attack forces. By the early 1990s, Navy and Marine Corps reserve fighter and light attack aircraft will also need replacement. The earlier versions of the F/A-18 could then be transferred to these reserve units, where they would replace older F-4 and A-7 aircraft. The AV-8B Vertical/Short Take-Off and Landing (V/STOL) aircraft will be procured as a replacement for Marine Corps AV-8A/Cs and A-4Ms.

Aircraft depot level maintenance has been funded to reach acceptable readiness levels for certain deficient areas. We have provided additional funding and have increased manning levels for the Naval Air Rework Facilities (NARFs) to support these objectives. To improve near-term readiness, we have provided additional funds for aviation component repair.

Major elements of the Navy's modernization program are discussed below:

(1) F-14 (TOMCAT)--The F-14 is an all-weather fighter that can be armed with six PHOENIX missiles to protect carrier battle groups. Continued funding will support procurement of two F-14 squadrons for each large-deck carrier.

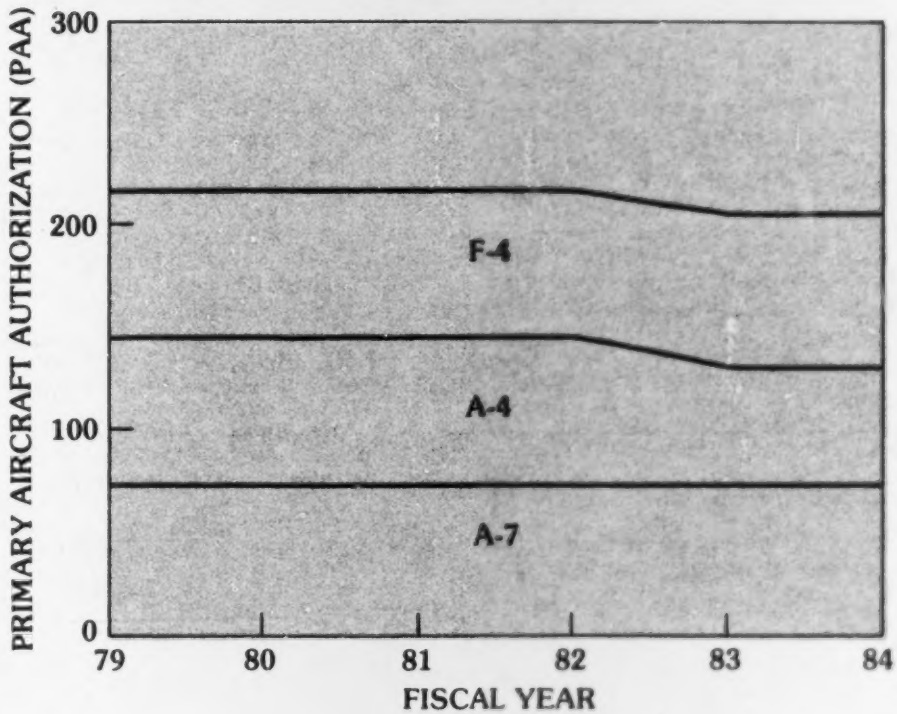
(2) F/A-18 (HORNET)--The F/A-18 is a multi-purpose aircraft that will replace F-4s in fighter squadrons and A-7s in light attack squadrons. It may also serve as a new tactical reconnaissance aircraft and will ultimately be used to modernize reserve fighter and attack squadrons.

(3) A-6E (INTRUDER)--Continued procurement of this all-weather/night attack aircraft will permit us to achieve and maintain programmed force levels, while continuing to convert older A-6s to KA-6 tankers.

(4) AV-8B (HARRIER)--A light-attack V/STOL aircraft, the AV-8B incorporates improvements over the AV-8A in gross take-off weight and performance. The AV-8B will replace Marine AV-8A/Cs and A-4Ms.

(5) AIM-7M (SPARROW)--An all-weather, semi-active, radar-guided air-to-air missile, the AIM-7M has greater electronic countermeasures resistance and look-down/shoot-down capabilities than the "F" model. Procurement of the missile began in FY 1980.

CHART III.C.5
**DEPARTMENT OF THE NAVY
RESERVE FIGHTER / ATTACK AIRCRAFT**



(6) AIM-9M (SIDEWINDER)--An infrared-guided air-to-air missile, the AIM-9M incorporates improved background discrimination and countermeasure capabilities.

(7) AIM-54A/C (PHOENIX)--The "C" model of this long-range, all-weather, air-to-air missile entered production in FY 1980 and has improved electronic countermeasure features. It is intended primarily for long-range attack of bombers before they can launch cruise missiles against ship targets.

(8) Tactical Aircraft Modifications--This account funds aircraft modifications to correct problems identified during development and initial operational use, or to enhance the capability of existing aircraft. Significant items in the current program include: A-6 inertial navigation, re-wing, and Target Recognition Attack Multi-Sensor (TRAM); A-7 Forward-Looking Infrared (FLIR) sensor and TF-41 engine; F-14 TF-30 engine improvement program, AWG-9 programmable signal processor, and installation of Television Control Set (TCS); EA-6B (ICAP II) EW capability improvements; and E-2C improved antenna (TRAC-A).

	FY 1981 Actual Funding	FY 1982 Planned Funding	FY 1983 Prop'd Funding	FY 1984 Prop'd for Authorization
<u>F-14</u>				
<u>(TOMCAT)</u>				
Procurement:				
Quantity	30	30	24	30
\$ Millions	927.4	1,184.9	1,178.6	1,402.5
Development:				
\$ Millions	11.7	17.0	14.7	17.5
<u>F/A-18</u>				
<u>(HORNET)</u>				
Procurement:				
Quantity	60	63	84	96
\$ Millions	2,012.3	2,420.8	2,847.4	2,858.5
Development:				
\$ Millions	170.9	190.0	109.2	19.4
<u>A-6E</u>				
<u>INTRUDER</u>				
Procurement:				
Quantity	12	12	8	8
\$ Millions	270.7	295.0	276.6	311.2
Development:				
\$ Millions	--	--	4.7	3.0

	<u>FY 1981</u> <u>Actual</u> <u>Funding</u>	<u>FY 1982</u> <u>Planned</u> <u>Funding</u>	<u>FY 1983</u> <u>Prop'd</u> <u>Funding</u>	<u>FY 1984</u> <u>Prop'd for</u> <u>Authorization</u>
<u>AV-8B</u>				
<u>(HARRIER)</u>				
Procurement:				
Quantity	--	12	18	30
\$ Millions	88.7	669.6	942.9	979.8
Development:				
\$ Millions	236.4	226.4	114.1	67.1
<u>AIM-7M</u>				
<u>(SPARROW)</u>				
Procurement:				
Quantity	625	585	670	1,220
\$ Millions	146.3	135.9	138.5	199.1
<u>AIM-9M</u>				
<u>(SIDE-</u>				
<u>WINDER)</u>				
Procurement:				
Quantity	220	700	500	450
\$ Millions	44.2	52.1	43.1	34.7
<u>AIM-54</u>				
<u>A/C</u>				
<u>(PHOENIX)</u>				
Modification:				
\$ Millions	4.1	7.8	6.6	54.6
Procurement:				
Quantity	210	72	108	360
\$ Millions	161.0	163.0	270.8	385.0
Development:				
\$ Millions	35.4	30.4	23.8	--
<u>Tactical Aircraft</u>				
<u>Modifications</u>				
Modification:				
\$ Millions	691.6	926.7	1,311.1	1,502.8

d. Enhancing Electronic Combat (EW,
C³CM, and Defense Suppression)
and C³ Capabilities

Funding has been requested for a balanced mix of lethal and nonlethal Electronic Combat (EC) assets designed to neutralize, disrupt, and destroy critical elements of the enemy's integrated air defense system. Our

ability to protect our own command, control, and communications systems and to disrupt enemy systems is vital to success in any air campaign.

Major elements of our programs in this area are discussed below:

(1) High Speed Anti-Radiation Missile (HARM)--The HARM air-to-surface missile is designed to suppress or destroy the land- and sea-based radars of enemy air defense systems. The missile is scheduled to become operational in FY 1983 under a joint Navy and Air Force program.

(2) Precision Location Strike System (PLSS)--PLSS is designed to locate, identify, and guide applicable munitions or weapon systems strikes on enemy air defense emitters in all-weather conditions from standoff ranges. Currently under development by the Air Force, PLSS is scheduled to become operational in the mid-1980s.

(3) EA-6B (PROWLER)--This sophisticated electronic naval support aircraft degrades enemy defenses by jamming their radars and communications systems. Significant improvements to its EW systems are programmed.

(4) Airborne Self-Protection Jammer (ASPJ)--This joint Navy and Air Force program will provide many of our tactical aircraft with an onboard electronic countermeasures system.

(5) ALQ-131 Electronic Countermeasures Pods--This Air Force program provides self-protection jammer pods for aircraft not scheduled to receive the ASPJ.

(6) Jam-Resistant Secure Voice and Data Link Communications--The Joint Tactical Information Distribution System (JTIDS) is being developed to provide a secure, jam-resistant, digital information system for tactical use by all the Services. The United Kingdom also plans to deploy JTIDS on selected platforms (e.g., NIMROD and TORNADO aircraft). Initial operating capability (IOC) is scheduled for the late 1980s. The Air Force is also proceeding with development of the SEEK TALK system and other jam-resistant secure voice communications systems to provide a secure voice system for the tactical air forces by the mid-1980s. These programs are discussed in more detail in Part III.F.

	FY 1981 Actual Funding	FY 1982 Planned Funding	FY 1983 Prop'd Funding	FY 1984 Prop'd for Authorization
<u>HARM</u>				
Procurement:				
Quantity	80	154	414	618
\$ Millions	126.9	204.8	354.6	413.1
Development:				
\$ Millions	79.7	25.2	6.9	5.8

	FY 1981 Actual <u>Funding</u>	FY 1982 Planned <u>Funding</u>	FY 1983 Prop'd <u>Funding</u>	FY 1984 Prop'd for <u>Authorization</u>
<u>PLSS</u>				
Procurement:				
\$ Millions	--	1.7	1.8	6.4
Development:				
\$ Millions	62.8	108.5	110.2	53.1
<u>EA-6B</u>				
Procurement:				
Quantity	6	6	6	6
\$ Millions	223.7	277.1	347.1	391.9
Development:				
\$ Millions	9.1	10.6	12.7	15.9
<u>ASPJ</u>				
Procurement:				
Quantity	140	120	120	52
\$ Millions	106.2	118.2	107.4	56.4
Development:				
\$ Millions	40.4	77.8	76.1	50.3
<u>ALQ-131 PODs</u>				
Development:				
\$ Millions	5.5	9.6	5.3	7.0
<u>JTIDS</u>				
Procurement:				
\$ Millions	--	26.3	25.6	21.9
Development:				
\$ Millions	88.3	132.4	167.8	138.5

e. Improving Target Acquisition,
Surveillance, Warning, and
Reconnaissance Capabilities

The location, identification, and destruction of enemy air defenses and other ground targets is important to effective tactical air operations and, ultimately, to the outcome of the battle. Our capabilities in this critical area are improved through the following programs:

(1) E-3A (AWACS)--This aircraft is equipped with a long-range, look-down radar with substantial jamming

resistance. It provides the Air Force with improved surveillance, warning, and control capabilities for use in CONUS air defense and in tactical theaters of operation.

(2) E-2C (HAWKEYE)--This aircraft provides the Navy with the airborne early warning and command and control capabilities needed for sea control and wartime air defense missions.

(3) TR-1--This aircraft, a derivative of the U-2, is designed to provide the Air Force with continuous, all-weather surveillance of the battle area. Its airframe is also common to the PLSS mission. Funding includes PLSS aircraft and associated TR-1 ground processing facilities.

	<u>FY 1981</u> <u>Actual</u> <u>Funding</u>	<u>FY 1982</u> <u>Planned</u> <u>Funding</u>	<u>FY 1983</u> <u>Prop'd</u> <u>Funding</u>	<u>FY 1984</u> <u>Prop'd for</u> <u>Authorization</u>
<u>E-3A (AWACS)</u>				
Procurement:				
Quantity	2	2	2	1
\$ Millions	270.0	257.9	176.7	220.2
Development:				
\$ Millions	62.1	52.4	78.9	62.2
<u>E-2C (HAWKEYE)</u>				
Procurement:				
Quantity	6	6	6	6
\$ Millions	240.9	206.2	352.7	315.9
Development:				
\$ Millions	18.8	18.8	52.3	48.2
<u>TR-1</u>				
Procurement:				
Quantity	4.0	5.0	4.0	5.0
\$ Millions	122.9	138.6	117.6	302.6
Development:				
\$ Millions	5.5	15.0	20.1	19.7

D. STRATEGIC NUCLEAR FORCES

1. Introduction

The Administration's comprehensive five-year program for revitalizing our strategic deterrent will provide both near-term improvements and the foundation for our force capabilities into the next century. Our modernization, investment, and research and development decisions will strengthen all elements of our strategic nuclear forces--intercontinental ballistic missiles (ICBMs); sea-based missiles; bombers; command, control, and communications systems; and strategic defense--in an effort that will arrest the decline of U.S. strategic capabilities and create a more stable and secure deterrent.

2. Strategic Offensive Forces

The highlights of our program for the strategic offensive forces are threefold:

- First, we will undertake a step-by-step plan to improve the strength and accuracy of our land-based missiles and to reduce their vulnerability by completing MX missile development and initially deploying 40 missiles in MINUTEMAN silos. Research and development on follow-on basing modes is under way. We will strive to make a basing decision in 1983, as directed by the Congress.
- Second, to strengthen our sea-based forces, we will deploy new submarine-launched missiles. For the long term, the TRIDENT II (D-5) submarine-launched ballistic missile (SLBM) will be deployed in TRIDENT submarines; in the near term, nuclear-armed sea-launched cruise missiles (SLCM) will be added on attack submarines.
- Third, to modernize our strategic bomber force, we will expand the air-launched cruise missile (ALCM) program, deploy the B-1B bomber beginning in FY 1986, develop an Advanced Technology Bomber for the 1990s, and re-engine many of our aerial tankers.

We have structured these initiatives to be mutually supportive, with additional capability becoming operational in each Triad element in a timely manner.

a. The ICBM Force

After a thorough review of MX basing options, the multiple protective shelter (MPS) basing scheme was cancelled by the President last October. We concluded that an MPS system would not be adequately survivable over the long term, since the Soviets could deploy additional warheads as fast as we could build shelters.

We are proposing a two-phase ICBM modernization program that, taken together, will reduce the vulnerability of our land-based missiles and will provide the earliest possible increase in ICBM force capability.

We are assessing three promising concepts for a long-term MX basing mode: deep basing (DB), ballistic missile defense (BMD), and continuous patrol aircraft (CPA). DB involves placing MX missiles in chambers below the ground to make them invulnerable to direct hits by nuclear weapons on the surface. BMD is designed to defend the MX in fixed, possibly superhardened silos or in some new, not yet defined, deceptive basing system. CPA would be designed to fly for dozens of hours without refueling. A large portion of the CPA force would be kept continuously airborne, patrolling over an area of millions of square miles. The technology used in CPA is likely to be applicable to other military and civil aircraft as well.

Simultaneously, we are proceeding with engineering development of the MX missile, and flight tests that will begin in 1983. We plan to build 100 operational missiles and, beginning in late 1986, to deploy 40 of them in MINUTEMAN silos.

As part of our strategic modernization program, we will retire our TITAN II force. These large, liquid-fueled ICBMs have been operational since 1963 and are quite expensive to maintain, especially considering their relatively small contribution to our overall strategic posture.

	FY 1981 Actual Funding	FY 1982 Planned Funding	FY 1983 Prop'd Funding	FY 1984 Prop'd for Authorization
<u>MX Missile and Interim Basing</u>				
Development:				
\$ Millions	1,491.6	1,943.2	2,759.3	2,651.5
Procurement:				
Quantity	--	--	9	53
\$ Millions	--	--	1,497.1	3,192.0
<u>MX Long-Term Basing</u>				
Development:				
\$ Millions	--	20.0	**	**

** To be determined.

b. The SLBM Force

Our program for the SLBM force will provide a cost-effective transition from a submarine force designed in the 1950s to one that will continue to ensure a high-confidence, sea-based deterrent well into the 21st century.

The 31 POSEIDON ballistic missile submarines (SSBNs) currently in the force were constructed between 1961 and 1967. In the 1970s, these SSBNs were converted to carry 16 POSEIDON (C-3) missiles with multiple independently targetable reentry vehicles (MIRVs). Twelve of these POSEIDON submarines are being further modified to carry the TRIDENT I (C-4) missile. This missile offers significant improvements in yield, accuracy, and range relative to the POSEIDON (C-3) missile. The first POSEIDON SSBN equipped with TRIDENT I missiles was deployed in October 1979; the twelfth will be deployed in early FY 1983. Weapon system reliability (WSR) in both the C-3 and C-4 missile has improved significantly in the past year. POSEIDON submarine retirements are programmed over the 1990s, after about 30 years of service.

The lead TRIDENT-class submarine, USS OHIO, was delivered to the Navy in October 1981. Deployment of the submarine with C-4 missiles is scheduled for September 1982. The TRIDENT has more (24 instead of 16) and larger missile tubes than the POSEIDON; is significantly quieter, thus making acoustic detection more difficult; and will have an increased at-sea, on-patrol time. Nine TRIDENT submarines have been authorized. Funding for the tenth (for which long-lead items and other funds have already been authorized) and for the eleventh is requested in FY 1983. A procurement rate of one SSBN per year is programmed in FY 1984-87.

To provide a follow-on missile for the entire TRIDENT submarine force, we will develop and procure the TRIDENT II (D-5) missile. We expect to begin full-scale engineering development in FY 1984; initial operating capability (IOC) is scheduled for December 1989. Relative to the C-4, the D-5 will have improved accuracy and payload; its larger size will enable it to take full advantage of the TRIDENT SSBN launch tube volume. TRIDENT submarines armed with TRIDENT II missiles will provide a capability to attack the full spectrum of targets from a reliable and enduring platform.

Nuclear-armed sea-launched cruise missiles will be deployed on attack submarines beginning in FY 1984. These weapons will provide some near-term hard target kill capability, while contributing to a strategic reserve.

	FY 1981 Actual <u>Funding</u>	FY 1982 Planned <u>Funding</u>	FY 1983 Prop'd <u>Funding</u>	FY 1984 Prop'd for <u>Authorization</u>
<u>TRIDENT</u>				
<u>Submarine</u>				
Procurement:				
\$ Millions	1,119.7	436.2	2,765.7	1,738.6
<u>TRIDENT II</u>				
<u>Missile</u>				
Development:				
\$ Millions	96.7	239.2	366.7	1,413.6

c. The Strategic Bomber Force

The strategic bomber force will be increasingly critical to our national security posture through the remainder of the decade. Of the Administration's new strategic initiatives, the bomber programs will add the most operational capability prior to 1990.

At the present time, we are confident that a large portion of our bomber force could survive a surprise Soviet attack and penetrate Soviet airspace to accomplish its mission. We expect, however, that the Soviet air defense threat will increase substantially, and will pose critical survivability problems to our manned bomber force later in the decade. Our aging B-52s, which incorporate 1950s technology, are increasingly less able to adapt to new operational environments and are increasingly more difficult and expensive to maintain.

To counter these problems and to strengthen our strategic force posture, we are proposing a comprehensive modernization program for the bomber force. In the near term, we are deploying air-launched cruise missiles. In the middle of this decade, consistent with the Congressional mandate for a new bomber, we will introduce the B-1B. Finally, for the 1990s, we will develop and deploy an Advanced Technology, or "Stealth," bomber. In addition to these new aircraft, we are proposing a modification program for some later-model B-52s that will keep them effective during the remainder of their operational service.

(1) Bomber Force Modernization

Our major near-term bomber modernization program is the ALCM. We propose to expand ALCM procurement, and will deploy over 3,000 ALCMs on B-52G/H and B-1B aircraft. Conversion of the first B-52G squadron to external ALCM carriage is now under way. By 1990, we plan to equip our later-model B-52s for ALCM carriage.

Our vigorous ALCM program will do much to redress the strategic imbalance relatively quickly. These small, low-flying, highly accurate missiles are effective against a wide range of targets and pose difficult problems for air defenses. The presence of a large number of cruise missiles would saturate enemy air defenses, increasing the survivability of our penetrating bombers.

For the long term, we plan to deploy a significant number of penetrating bombers and cruise missiles. Our studies show that the most effective bomber force should contain substantial numbers of both. Accordingly, we are providing for the development of an Advanced Technology Bomber (ATB), incorporating "Stealth" characteristics, with an IOC in the 1990s. We expect that the ATB will be capable of penetrating all existing and projected Soviet air defenses until well past the turn of the century.

Unfortunately, we do not expect our current aircraft to remain effective penetrators until the ATB can be deployed. The lack of a highly capable penetrating bomber in the late 1980s would constitute an unacceptable deficiency in our strategic forces. Therefore, we will also introduce a new bomber, the B-1B, in 1986. The B-1B is a highly effective multi-role bomber that offers substantial improvements over the previously cancelled B-1. It is intended to serve primarily as a strategic penetrator well into the 1990s, and will offer major improvements in base escape and penetration ability relative to the B-52. As the ATB is deployed in substantial numbers, the B-1B will carry an increasingly higher proportion of ALCMs in its weapons mix. We are acquiring 100 B-1Bs to provide urgently needed strategic capability in this decade. These aircraft will continue to fulfill important missions throughout their operational life.

(2) The Current Bomber Force

The current bomber force consists of 75 operational B-52Ds, 151 B-52Gs, 90 B-52Hs, and 60 FB-111As. These aircraft suffer from varying degrees of aging and obsolescence. Our bomber modernization program will enable us to plan for the retirement of a large part of the current force. We propose to phase out some B-52Ds in the near term, some B-52Gs in the late 1980s, and FB-111As in the early 1990s. We expect to retain our later-model B-52s as standoff cruise missile carriers (CMCs) into the 1990s.

We also propose to modify and improve our current bombers. All B-52G/Hs will be outfitted with a new Offensive Avionics System (OAS). The OAS is necessary for cruise missile conversion and will improve aircraft reliability, maintainability, and weapons delivery effectiveness. We propose to harden selected B-52s against the effects of electromagnetic pulse (EMP) and to outfit these aircraft with improved electronic countermeasures (ECM) equipment.

(3) Aerial Tankers

Our aerial tanker force is essential to all phases of our military strategy. Aerial tankers are needed to support strategic forces in carrying out the Single-Integrated Operational Plan (SIOP); they also support general purpose force operations worldwide. Planned deployment of ALCMs on existing strategic bombers, together with the introduction of new air-refuelable aircraft, will make tanker support even more vital in the future. Unfortunately, we do not have sufficient tanker capability today to support our stated national objectives. We will resolve some of our tanker deficiencies by replacing a substantial portion of the current bomber force with more fuel-efficient aircraft; however, substantial increases in overall tanker capability are still needed.

We will improve tanker capability by acquiring additional KC-10 tanker/cargo aircraft and by re-engining our existing KC-135As. The KC-10 is a proven tanker system that has unique capabilities in support of general purpose deployments. It is also a highly capable airlift aircraft. KC-135A re-engining replaces aging and environmentally objectionable J57s with more efficient engines, thus improving total fuel offload capability.

We consider both KC-10 procurement and KC-135A re-engining to be very attractive programs, and will pursue both vigorously. In the near term, we will re-engine some of our KC-135s with refurbished JT3D turbofans obtained from commercial sources. We also plan to re-engine 300 KC-135s with a current-technology turbofan (the CFM56) through FY 1987. The CFM56 program also includes a substantial aircraft modernization package that will keep the KC-135 fleet operational well into the 21st century. Finally, we also propose to purchase 44 additional KC-10s, primarily to alleviate our deficiencies in mobility forces.

	FY 1981 Actual <u>Funding</u>	FY 1982 Planned <u>Funding</u>	FY 1983 Prop'd <u>Funding</u>	FY 1984 Prop'd for <u>Authorization</u>
<u>Air-Launched</u>				
<u>Cruise Missile</u>				
<u>Program</u>				
Development:				
\$ Millions	108.9	103.7	186.8	63.0
Procurement:				
Quantity	480	440	440	440
\$ Millions	569.9	597.1	676.7	858.7

	FY 1981 Actual <u>Funding</u>	FY 1982 Planned <u>Funding</u>	FY 1983 Prop'd <u>Funding</u>	FY 1984 Prop'd for <u>Authorization</u>
<u>Modification</u> <u>of B-52 Stra-</u> <u>tegic Bomber</u>				
Development:				
\$ Millions	121.7	95.6	121.8	82.1
Procurement:				
\$ Millions	507.3	497.3	572.9	985.6
<u>B-1B</u>				
Development:				
\$ Millions	260.1	471.0	753.5	717.9
Procurement:				
Quantity		1	7	10
\$ Millions		1,621.9	4,033.5	6,142.1
<u>Bomber Research</u> <u>and Development</u>				
Development:				
\$ Millions	--	--	60.0	300.0
<u>KC-135A</u> <u>Re-engining</u> <u>(JT-90/CFM-56)</u>				
Development:				
\$ Millions	20.1	31.8	29.0	11.8
Procurement:				
Quantity	19	37	25	58
\$ Millions	144.5	301.3	584.0	1,341.4

3. Strategic Defensive Forces

a. Program Basis

We have virtually ignored our strategic defensive systems for more than a decade. As a result, we have large gaps in the North American air defense warning network; our strategic air defense interceptors are obsolete; and our anti-satellite and ballistic missile defense programs have lagged behind the Soviets'. Our program ends these years of neglect. Together with Canada, we have taken the first steps toward restoring credible strategic air defenses. We also plan to conduct a vigorous R&D program for ballistic missile defense and to pursue an operational anti-satellite system. In coordination with the Federal Emergency Management Agency, we will strive to improve our civil defenses. In the years ahead, we will continue to review our strategic defense needs to determine what additional steps may be required.

b. Program Status and Description

Our FY 1983-87 program addresses each element of our strategic defense system: air defense, ballistic missile defense, and space defense.

(1) Air Defense

Soviet bombers flying at low altitudes could penetrate undetected through gaps in radar coverage. We are taking a number of steps to correct this deficiency. We plan to deploy new ground-based atmospheric surveillance radars and modern interceptors to detect and identify unknown traffic, to control access to our sovereign airspace, and to provide an active defense capability. We also plan to buy additional Airborne Warning and Control System (AWACS) aircraft for North American air defense.

(a) Surveillance Systems

To improve atmospheric surveillance, we will procure and deploy over-the-horizon backscatter (OTH-B) radars for all-altitude coverage of the eastern, western, and southern approaches to CONUS. For northern atmospheric surveillance, we plan to upgrade the Distant Early Warning (DEW) Line across Alaska, northern Canada, and Greenland.

(b) Interceptor Forces

To improve the interceptor force, we plan to replace five active squadrons of aging F-106 interceptors with F-15s. The first squadron of 18 aircraft will be assigned to air defense in FY 1982. In addition, the three CONUS-based F-15 tactical fighter wings will provide air defense support as a secondary mission. The F-15s will provide our air defense forces with a long-needed look-down/shoot-down capability to deal with low-altitude penetrators, and will have sufficient flight range to use information provided by new long-range surveillance radars. Canada is scheduled to phase in new CF-18 fighter aircraft starting in FY 1983. U.S. and Canadian active squadrons and U.S. Air National Guard (ANG) squadrons will continue to provide about 312 interceptors (F-106s, F-15s, F-4s, CF-101s, and CF-18s) for North American air defense. Interceptor forces assigned to the North American Aerospace Defense Command (NORAD), along with Tactical Air Command (TAC) F-15 and F-4 augmentation forces, now maintain ground alert at 26 sites around the periphery of the 48 contiguous states. The Air Force, Navy, and Marine Corps are tasked to provide additional interceptors for air defense in a crisis.

(c) Airborne Surveillance and Control Systems

We plan to buy additional AWACS aircraft for North American air defense. In the near term, before ground-based surveillance improvements are completed, we plan to fly random AWACS surveillance and warning patrols

over the coastal and northern approaches to CONUS. After the ground-based radars are deployed, AWACS would be used to augment and support them. In wartime, the AWACS aircraft would provide survivable surveillance and control of interceptors defending against bomber attacks.

(2) Ballistic Missile Defense (BMD)
Research and Development (R&D)

Although ground-based deployment of MX ultimately may require a BMD for survivability, today's BMD technology is not adequate to defend against Soviet missiles. For the future, we are not yet sure how well ballistic missile defenses will work; what they will cost; whether they would require changes to the ABM Treaty; and how additional Soviet ballistic missile defenses--which would almost certainly be deployed in response to any U.S. BMD system--would affect U.S. and allied offensive capabilities. We plan to pursue a vigorous R&D program to provide an active defense of land-based missiles. The Low Altitude Defense (LoAD) program will be restructured to accelerate development of an advanced terminal defense for ICBMs. Work will continue on the exoatmospheric overlay program to provide a 1990s response to unconstrained growth in Soviet reentry vehicles.

(3) Space Defense

We are funding several programs in FY 1983-87 to enhance our space defense capabilities. First, we are improving our ability to monitor space activities. We will continue to deploy a network of five worldwide ground-based electro-optical deep-space surveillance sensors to improve our ability to detect, track, and identify space objects. Several existing radars will be modified to provide additional high- and low-altitude surveillance coverage. We are working on information processing improvements to provide better orbital predictions and to support anti-satellite targeting and strike assessment. We also are continuing R&D on long wavelength infrared (IR) space-based surveillance technologies, and are assessing the technical feasibility of space-based laser weapons.

The Air Force is continuing development of the Prototype Miniature Air-Launched System (PMALS), which will provide an anti-satellite capability.

c. Program Costs

The development and procurement costs for the strategic defense programs discussed in this section are given below:

	FY 1981 Actual <u>Funding</u>	FY 1982 Planned <u>Funding</u>	FY 1983 Prop'd <u>Funding</u>	FY 1984 Prop'd for <u>Authorization</u>
<u>Air Defense</u>				
Development:				
\$ Millions	18.0	5.6	2.3	1.1
Procurement:				
Quantity	18	18	18	36
\$ Millions	399.3	575.1	688.5	1,198.5
<u>Ballistic Missile Defense</u>				
Development:				
\$ Millions	266.6	462.1	870.6	810.9
Procurement:				
\$ Millions	--	57.3	59.5	244.0
<u>Space Defense</u>				
Development:				
\$ Millions	148.3	202.0	218.3	181.9
Procurement:				
\$ Millions	--	--	--	32.8

4. Strategic Command, Control, and
Communications

Strategic command, control, and communications (C³) systems are needed to ensure that we could employ our nuclear forces effectively, which is essential to credible deterrence. Strategic C³ systems must be capable of supporting an initial retaliatory response by our forces during or after an enemy attack. They must also be able to operate reliably over an extended period after an attack, should that prove necessary. Our five-year plan funds several programs to improve the survivability of our strategic C³ systems. We will also undertake a vigorous and comprehensive R&D program to improve system endurance during a nuclear war.

a. Missile Warning and Attack Assessment

Survival of the bomber force and important elements of our C³ system depends on high-confidence tactical warning. We also need attack assessment information that is accurate and timely enough to assist the National Command Authority (NCA) in selecting the appropriate response. To meet these objectives, we are funding programs to improve the survivability, performance, and coverage of the satellites and radars used to warn us of a Soviet missile attack and to assess its size and scope.

(1) Satellite Early Warning System

Infrared (IR) sensors installed on missile warning satellites would provide initial detection of Soviet ICBM and SLBM launches. Currently, these satellites transmit data to fixed ground-based processing stations. To reduce our dependence on these vulnerable facilities, we will deploy mobile ground terminals (MGTs) to receive, process, and disseminate missile warning data from satellites. New warning satellites, scheduled to replace those now on orbit, will be more survivable and will improve our attack assessment capability.

(2) Ground-Based Radar Surveillance

We maintain ground-based radars to provide redundant coverage (satellite IR detection and radar surveillance) of Soviet missile launch areas. Ballistic Missile Early Warning System (BMEWS) radars at sites in Greenland, Alaska, and England would confirm satellite warning of an ICBM attack. Phased-array radars (PAVE PAWS) deployed along our east and west coasts would confirm satellite warning of an SLBM attack launched from normal Soviet SSBN operating areas. The Perimeter Acquisition Radar Attack Characterization System (PARCS), a converted BMD radar located in North Dakota, augments BMEWS coverage of ICBM attacks against central CONUS targets and provides SLBM surveillance of Arctic Ocean areas. Upgrades to the Greenland and England BMEWS radars will produce better estimates of attack size and objectives. Together with programmed improvements in satellite early warning system performance, these modifications should be sufficient to determine and verify an attack on our ICBM force. We will replace our older FPS-85 and FSS-7 SLBM surveillance radars in Florida with a new PAVE PAWS radar to provide improved surveillance of possible SLBM launch areas southeast of the United States. To complete redundant coverage of potential SLBM launch areas, we plan to install a second new PAVE PAWS radar for SLBM surveillance to the Southwest.

(3) Advanced Missile Warning System

Because we are concerned with the potential vulnerabilities of missile warning systems in a nuclear war, we are funding R&D for an advanced missile warning system designed to operate reliably after an initial Soviet attack. This program will build on technologies now under development. Advanced missile warning research is structured to support an FY 1987 decision on whether to proceed to full-scale development of a system that would replace or augment the satellite early warning system in the 1990s.

(4) Integrated Operational Nuclear
Detonation Detection System
(IONDS)

IONDS consists of improved nuclear detonation (NUDET) detection sensors that will be installed on the satellites of the NAVSTAR Global Positioning System

(GPS). IONDS will greatly increase our capability for rapid detection, location, and reporting of nuclear detonations worldwide. It will contribute to nuclear test ban monitoring and intelligence collection in peacetime. In a nuclear war, it would provide damage and strike assessment information.

b. Command Centers

We need command centers that will survive a nuclear attack and be able to support decisionmaking and the direction of our strategic forces. To meet this objective we will continue to upgrade the communications equipment on our airborne command posts. Since these aircraft are maintained on airborne and ground alert, we expect that a number of them would survive an initial Soviet attack. Our five-year program will also increase the endurance of our command centers.

(1) Airborne Command Centers

To satisfy the requirements of the NCA/JCS National Emergency Airborne Command Post mission, we will deploy a total of four E-4B airborne command posts by FY 1985. (The first of these aircraft is already operational.) The E-4B is a modified Boeing 747 aircraft that has been hardened against the effects of nuclear detonations, including electromagnetic pulse (EMP). It is outfitted with high-powered, anti-jam, very low frequency (VLF) and low frequency (LF) communications equipment, and with super high frequency (SHF) satellite communications equipment, to provide reliable and survivable communications to our forces.

We are funding upgrades to the EC-135 airborne command posts (modified Boeing 707 aircraft) serving the Commander-in-Chief, Strategic Air Command (CINCSAC) and other nuclear force commanders. We are hardening the aircraft against EMP effects and are providing their VLF/LF communications systems with anti-jamming protection and increased transmitter power. We are also developing improved satellite communications terminals for installation on the aircraft. These communications upgrades should give EC-135 airborne command posts a capability comparable to that of the E-4B for sending emergency action messages to the forces.

(2) Mobile Command Centers

We believe that the E-4B and the upgraded EC-135 airborne command posts will greatly improve our capability to retaliate effectively during the early phase of a nuclear conflict. We remain concerned, however, about the ability of airborne command posts to operate beyond the first few days of a nuclear war. We will therefore develop and deploy terrestrial mobile command centers (MCCs) that could supplement or take over the key functions of airborne command posts if they could no longer operate effectively.

c. Communications

Survivable communications links are needed to ensure reliable dissemination of emergency action messages to our ICBMs, bombers, and submarines in a nuclear war. Our FY 1983-87 program will reduce the vulnerability of our strategic communications to physical attack, jamming, and nuclear effects.

(1) Satellite Communications Systems

We will achieve FOC for the Air Force Satellite Communications (AFSATCOM) system in 1983 by completing installation of satellite communications terminals at ICBM launch control centers and on airborne command posts, SAC bombers, and TACAMO aircraft. The AFSATCOM space segment includes UHF communications channels on the Fleet Satellite Communications System (FLTSATCOM) satellites in geostationary orbits and on other host satellites. To increase AFSATCOM jamming protection, we plan to deploy SHF single-channel transponders (SCTs) on geostationary Defense Satellite Communications System (DSCS) Phase III satellites. By 1986, we expect E-4B airborne command post aircraft to be able to communicate through the SHF SCTs. We will procure three additional FLTSATCOM satellites to maintain AFSATCOM service throughout the 1980s and to serve the needs of Navy general purpose forces.

To control our forces effectively during a nuclear war, we would need two-way communications with jamming protection between commanders and forces. Therefore, we are funding the development of a new satellite communications system (MILSTAR) providing extremely high frequency (EHF) communication channels that would be able to operate against severe enemy jamming.

(2) Mobile Communications Systems

We depend on Navy TACAMO EC-130 aircraft for survivable communications to our ballistic missile submarines. Currently, one of these aircraft is continuously airborne over the Atlantic to ensure that NCA orders could be relayed to SSBNs in that area, even if fixed, ground-based transmitters were destroyed. To satisfy a requirement for airborne TACAMO in the Pacific, we will deploy a fleet of 18 TACAMO EC-130 aircraft by mid-FY 1983. In the longer term, we are planning to replace the TACAMO EC-130s with a new aircraft, designated EC-X. The EC-X will initially be equipped with the same communications gear as the EC-130, but its additional capacity will allow us to add more C³ equipment in the future. We plan to deploy a Pacific EC-X squadron and an Atlantic squadron by the late 1980s.

(3) Ground-Based Communications Systems

We will plan to develop and deploy a network of proliferated communications relay nodes within the United States to assure dissemination of warning information, launch-for-survival orders, and emergency action

messages to CONUS-based forces in the early phase of a nuclear attack. To upgrade our peacetime communications to deployed submarines and to support the transition to wartime operations, we have decided to deploy the extremely low frequency (ELF) communications system at two sites in CONUS and to equip all nuclear submarines with ELF receivers.

d. Program Costs

Development and procurement costs for the strategic C³ programs discussed in this section are given below.

	<u>FY 1981</u> <u>Actual</u> <u>Funding</u>	<u>FY 1982</u> <u>Planned</u> <u>Funding</u>	<u>FY 1983</u> <u>Prop'd</u> <u>Funding</u>	<u>FY 1984</u> <u>Prop'd for</u> <u>Authorization</u>
<u>Strategic Sur-</u> <u>veillance and</u> <u>Warning (Satel-</u> <u>lite Early</u> <u>Warning System,</u> <u>BMEWS, PAVE</u> <u>PAWS, Advanced</u> <u>Warning System,</u> <u>IONDS)</u>				
Development:				
\$ Millions	89.0	183.9	243.0	216.8
Procurement:				
\$ Millions	159.9	383.5	588.1	517.0
<u>Strategic</u> <u>Command Centers</u> <u>(E-4B ABNCP,</u> <u>EC-135 Upgrades,</u> <u>MCC)</u>				
Development:				
\$ Millions	9.8	19.4	29.0	83.6
Procurement:				
\$ Millions	146.5	148.1	33.3	38.1
<u>Strategic Com-</u> <u>munications</u> <u>(AFSATCOM,</u> <u>MILSTAR, TACAMO,</u> <u>Bomber VLF/LF</u> <u>Receivers, CONUS</u> <u>Radio Network,</u> <u>ELF)</u>				
Development:				
\$ Millions	83.8	139.2	249.8	440.7
Procurement:				
\$ Millions	48.5	76.6	65.4	190.5

E. NON-STRATEGIC NUCLEAR FORCES

1. Introduction

In addition to strategic nuclear forces, the United States has a number of systems of less than inter-continental range that are capable of delivering nuclear weapons. These systems are deployed with land, naval, and air forces to enhance deterrence by providing nuclear capabilities at the lower end of the nuclear spectrum, firmly linking strategic forces to our conventional capabilities.

The United States has a variety of nuclear weapons designated for non-strategic use. Most of these weapons are deployed outside the United States; the majority support NATO forces in Europe. These include intermediate-range nuclear forces (INF), such as air-delivered bombs and intermediate-range missiles; short-range nuclear forces (SNF), such as artillery projectiles and surface-to-surface missiles; land-based defensive systems, such as surface-to-air missiles and atomic demolition munitions; and maritime systems. Although they are strategic systems, some POSEIDON submarine-launched ballistic missiles are committed NATO for non-strategic targeting. Defensive nuclear weapons, such as anti-air warfare (AAW) and anti-submarine warfare systems, are deployed aboard some of our ships and submarines.

The most important objective of our non-strategic nuclear force modernization program is the deployment of 464 ground-launched cruise missiles (GLCMs) and 108 PERSHING II launchers in Europe. We are also modernizing our stockpiles of nuclear artillery, short-range missiles, bombs, and maritime weapons. We continue to seek improvements in the safety, security, and survivability of our nuclear warheads and systems.

2. Program Description and Status

a. Longer-Range INF Missiles

NATO does not have any land-based longer-range INF missiles at the present time. This will be changed by the introduction of two new land-based missile systems, PERSHING II and GLCM, in late 1983. The PERSHING II ballistic missile, a follow-on to the shorter-range PERSHING IA now deployed in Europe, is now in engineering development. GLCM, which is also in engineering development, has an operational design range of 2,500 km. The high accuracy and yields of PERSHING II and GLCM will provide a capability to attack hard targets while limiting collateral damage. Table III.E.1 shows current and projected funding for these systems.

TABLE III.E.1

PERSHING II and GLCM Costs

	FY 1981 Actual <u>Funding</u>	FY 1982 Planned <u>Funding</u>	FY 1983 Prop'd <u>Funding</u>	FY 1984 Prop'd for <u>Authorization</u>
<u>PERSHING II 1/</u>				
Procurement:				
Quantity	--	21	91	95
\$ Millions	2.3	221.6	508.6	431.1
RDT&E:				
\$ Millions	149.4	150.6	111.3	23.6
<u>GLCM 1/</u>				
Procurement:				
Quantity	11	54	120	120
\$ Millions	164.1	350.5	530.7	474.0
RDT&E:				
\$ Millions	107.6	80.1	28.6	24.0

1/ DoE funds are not included.

The deployment of a mixed ballistic missile/cruise missile force hedges against the unexpected neutralization of either system, provides the flexibility to select the best weapon for a given mission, and greatly complicates enemy planning. PERSHING II offers a high assurance of penetrating future Soviet defenses, provides the capability to strike time-urgent targets, and takes advantage of the existing PERSHING IA infrastructure. GLCM's longer range allows it to attack deeper targets and to be based farther rearward, thereby increasing its pre-launch survivability and offering an opportunity for broader participation among the allies through deployments on their soil.

The deployment of PERSHING II and GLCM will permit greater flexibility in the employment of dual-capable aircraft (DCA), thus improving NATO's conventional war-fighting capabilities. PERSHING II and GLCM deployments will also significantly enhance deterrence by increasing NATO's current capability to destroy fixed targets.

b. Shorter-Range INF Missiles

NATO's current shorter-range INF missiles are limited to PERSHING IA ballistic missiles. U.S. PERSHING IAs will be replaced with PERSHING II missiles on a one-for-one basis. The Federal Republic of Germany will retain their current PERSHING IAs.

c. INF Aircraft

NATO's current INF aircraft include dual-capable VULCAN, F-111, F-4, F-104, and JAGUAR aircraft. (The VULCAN and F-111 have the capability to attack targets in the western Soviet Union in addition to Eastern Europe.) We are undertaking several programs to modernize our INF aircraft. NATO will replace, by the mid-1980s, most of its current DCA with dual-capable F-16 and TORNADO fighter-bombers. We are modernizing our tactical bomb stockpile with the deployment of new models that have improved military characteristics and enhanced safety and security features.

d. Short-Range Nuclear Forces

Short-range nuclear weapons include 8-inch and 155mm howitzers and associated artillery-fired atomic projectiles (AFAPs), and LANCE and HONEST JOHN surface-to-surface missiles. These forces directly support ground forces in combat with the enemy and would be used for shallow interdiction. (HONEST JOHN has been replaced by LANCE in U.S. delivery units but continues to be deployed in some non-U.S. NATO units.)

We are undertaking several programs to upgrade our short-range nuclear capability. Included among these are production of new 8-inch artillery rounds and additional LANCE warheads, both incorporating an enhanced radiation (ER) feature. The new artillery round, a rocket-assisted projectile (RAP), has a greater range than the current round and corrects other performance deficiencies. Table III.E.2 shows current and projected funding for this program.

TABLE III.E.2

8-Inch AFAP Costs

	FY 1981 Actual Funding	FY 1982 Planned Funding	FY 1983 Prop'd Funding	FY 1984 Prop'd for Authorization
<u>8-Inch AFAP 1/</u>				
Procurement:				
\$ Millions	24.6	16.1	14.4	11.7
RDT&E:				
\$ Millions	1.8	0.0	0.0	0.0

1/ DoE funds are not included.

These new ER warheads will be stockpiled solely on U.S. territory. Any decision to deploy ER warheads would be taken only after close consultation with any country on whose territory they would be based, and then only with the explicit approval of the President.

e. Land-Based Defensive Systems

Land-based defensive forces include the NIKE-HERCULES air defense system and atomic demolition munitions (ADMs). We plan to retire our NIKE-HERCULES nuclear warheads as improved conventional air defense systems are deployed. We do not intend to replace ADMs with new nuclear weapons when they reach the end of their stockpile lifetime.

f. Maritime Systems

NATO's current longer-range maritime systems include U.K. POLARIS and U.S. POSEIDON submarine-launched ballistic missiles (SLBMs) and U.S. carrier-based aircraft. (France also maintains ballistic missile submarines (SSBNs), but they are not formally committed to NATO.) The United Kingdom plans to modernize its SLBM force in the 1990s by replacing its four POLARIS-carrying SSBNs with either four or five new British SSBNs carrying TRIDENT missiles. Like the VULCANS and F-111s, these maritime forces are able to attack targets in the western Soviet Union.

Our other maritime systems include anti-air, anti-submarine, and anti-surface ship warfare systems, such as the TERRIER, ASROC, SUBROC, air-delivered nuclear depth bombs, and carrier-based tactical bombs. To modernize the nuclear capability of our submarines and surface ships, we are developing weapons that will enable us to counter the enemy air threat more effectively and to attack enemy submarines from longer ranges. While all of these weapons would help defend our naval forces in a nuclear war, they would also strengthen deterrence. These weapons, and our sea-based nuclear forces for land attack, in conjunction with our land-based nuclear forces, support our policy that we will not permit the Soviets to limit a nuclear war to the sea.

g. C³I Systems

We continue to seek improvements in the security, reliability, and capability of the command, control, communications, and intelligence (C³I) systems that support our non-strategic nuclear forces.

In 1981 we completed a number of urgent upgrades in our communications links to U.S. custodial units in Europe. We extended the European Command and Control Console System (ECCCS) and installed new high frequency (HF) radios at four existing broadcast control stations. In addition, we have begun a program to provide a modern, survivable, jam-resistant and EMP-hardened HF radio system in Europe. We are continuing to deploy satellite communications terminals for our non-strategic nuclear forces, to

provide redundant means of transmitting emergency action messages. We are also addressing total long-range C³I requirements for nuclear weapons custody, targeting, and control. We expect to include key initiatives identified in these studies in future defense budgets.

h. Safety, Security, and Survivability

The safety, security, and survivability of our nuclear forces are key elements of our modernization program. We are continuing to make our nuclear forces more survivable in combat. We are taking steps to protect our nuclear weapons from seizure by enemy forces, terrorists, or other subversive organizations. Additionally, we are working closely with the Department of Energy to make our nuclear systems safer and more secure.

F. COMMAND, CONTROL, COMMUNICATIONS AND INTELLIGENCE (C³I)

1. Program Basis

a. Missions and Functions

Our C³I system provides the capability required to transform individual weapons systems into an integrated, effective force. This system must satisfy the needs of all echelons of our forces to observe, provide warning and attack assessment, process information, support decisionmaking, communicate, navigate, and degrade an enemy's ability to perform those functions. The difficulty of this mission is underscored by the need for worldwide execution under conditions that range from day-to-day peacetime operations through all feasible levels of conflict.

The components of the C³I system dedicated to specific warfare missions are discussed elsewhere in this report. This chapter focuses on the status of C³I assets that support cross-mission and cross-Service needs.

b. Major Initiatives

We are pursuing four major initiatives to improve our ability to manage, procure, and operate our C³I system.

- We are giving our C³I system equal priority with the weapon systems they support, stressing survivability and endurance, and treating the overall C³I-weapon system mix as a totality. This perspective will ensure the needs of the weapon systems are satisfied over a broad range of possible conflict environments.
- We are pursuing a planning process which views the evolving C³I-weapon system over a 15 year horizon to guide the direction and pace of that evolution. In this context, the Joint Chiefs of Staff and the Defense Intelligence Agency, in response to guidance and direction from the OSD staff, are focusing on cross-Service, cross-command, cross-program, and international command planning and requirements. By adopting this perspective, we hope to improve program stability and create an integrated system that is affordable, effective, survivable, and enduring.
- We are designing and deploying an enhanced C³I system which, through emphasis on survivability and endurance, can resist the current and projected Soviet threat.

- We are stressing system interoperability, both among our own Services and with our allies, to preserve the order and cohesiveness of our forces and to use our total assets most effectively.

2. Program Description

Consistent with our total systems view of the C³I-weapon system mix, we manage our C³I program in the context of major mission areas as depicted in Chart III.F.1:

- nuclear forces C³;
- theater and tactical C³;
- defense-wide C³;
- electronic warfare (EW) and C³ counter-measures (C³CM); and
- defense-wide intelligence.

(U) Chart III.F.2 summarizes the funding requested for C³I programs by major mission area for FY 1983.

a. Nuclear Forces C³

The President recently approved a plan that seeks to redress the relative imbalance between U.S. and USSR strategic forces by ensuring the total U.S. strategic C³I-weapon system mix is effective, survivable, and enduring. To realize that goal we are developing a balanced strategic modernization package that includes improvements to our strategic surveillance and warning systems, command centers, and communications. Major elements include: continuing efforts to enhance the survivability and endurance of our missile attack warning system and to acquire an improved nuclear detonation detection and position fixing capability; upgrading existing airborne command centers and reinforcing C² for enduring force management; and developing improved satellite communications relay links for essential force management functions. Additional details of the strategic modernization program are presented in Part III.D.

In the area of non-strategic nuclear forces C³, a comprehensive system improvement plan has been prepared and is undergoing final approval. The overall objective of the plan is to ensure the effectiveness of non-strategic nuclear forces, under a strategy of flexible response, by improving C³ security and survivability. Details of the improvement program in Europe are given in Part III.E.

b. Theater and Tactical C³

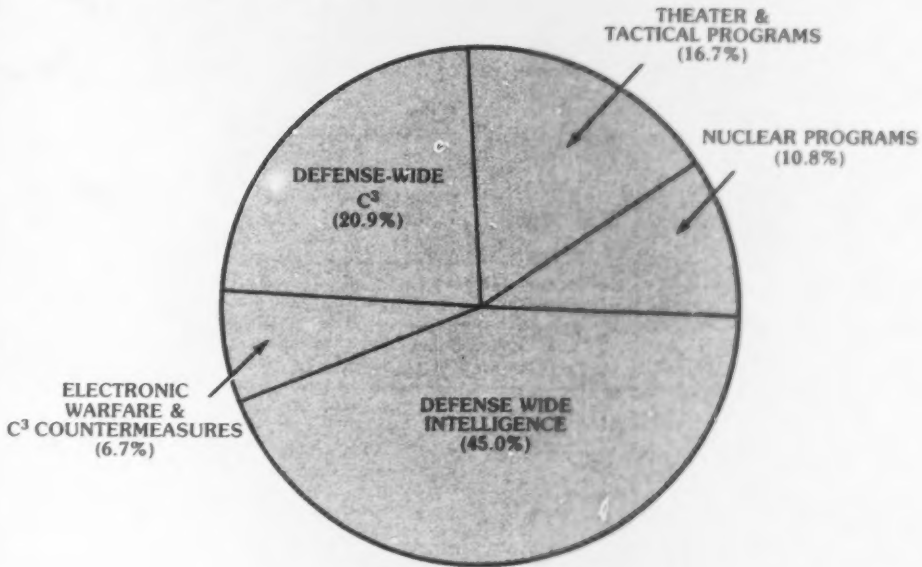
Our theater and tactical C³ program emphasizes initiatives in four areas:

CHART III.F.1
C³I MISSION AREA STRUCTURE

NUCLEAR PROGRAMS		THEATER & TACTICAL PROGRAMS	
• STRATEGIC SURVEILLANCE & WARNING SYSTEMS • STRATEGIC COMMAND & CONTROL SYSTEMS • STRATEGIC COMMUNICATIONS • NON-STRATEGIC NUCLEAR FORCES^{C3}		• THEATER & TACTICAL SURVEILLANCE, RECONNAISSANCE & TARGET ACQUISITION • THEATER & TACTICAL COMMAND & CONTROL SYSTEMS • THEATER & TACTICAL COMMUNICATIONS	
DEFENSE-WIDE PROGRAMS			
DEFENSE-WIDE C3	ELECTRONIC WARFARE & C ³ COUNTERMEASURES	DEFENSE-WIDE INTELLIGENCE	
• NAVIGATION & POSITION FIXING • BASE & SUPPORT COMMUNICATIONS • COMMON-USER COMMUNICATIONS • COMMUNICATIONS SECURITY • INFORMATION SYSTEMS	• DEFENSIVE ELECTRONIC COUNTERMEASURES • RADAR WARNING RECEIVERS • MUTUAL SUPPORT ELECTRONIC WARFARE • C3 COUNTERMEASURES	• NATIONAL FOREIGN INTELLIGENCE PROGRAM • TACTICAL INTELLIGENCE AND RELATED ACTIVITIES	

CHART III.F.2
(U) C³I PROGRAM
(FY 1983 BUDGET REQUEST)

TOTAL = \$26,051



*INCLUDES WARFARE COMMAND AND CONTROL
NOTE: SUM DOES NOT TOTAL 100% BECAUSE OF ROUNDING ERRORS

- We are improving our ability to participate in joint and combined operations worldwide. One activity pivotal to these operations is the Combat Identification System (CIS) program.
- We are seeking to improve our force management capabilities emphasizing C³ means deployable to areas where we have no permanent facilities. Key programs in this area include the E-3A Airborne Warning and Control System (AWACS), Joint Crisis Management Capability (JCMC), and Joint Tactical Fusion Program.
- We are improving information distribution capabilities for tactical forces. This initiative encompasses joint efforts in the areas of digital data exchange and jam resistant, secure voice systems.
- We are pursuing programs that enhance interoperability, survivability, and restorability of essential C³ functions. Key activities in this area include the Joint Interoperability of Tactical Command and Control Systems (JINTACCS) program and the Joint Tactical Communications Program (TRI-TAC).

These specific joint Service programs are discussed below. Highlights of theater and tactical C³I programs which relate to single mission areas are presented in Part III.A, B, C, E, H, and K, and NATO-related C³I initiatives are described in Part III.I

(1) Combat Identification System

We have established a joint Service CIS Program Office to develop a total identification system that is interoperable with our NATO allies. The system will draw upon identification information from direct sources (e.g., Mark XV, an improved question and answer system) and indirect sources (e.g., C² and external sensor support). An important milestone in the program was achieved in June when we confirmed draft Standard NATO Agreement (STANAG) 4162. However, we have reserved the right to explore promising options which are non-compliant with the draft STANAG. We expect to complete a cost-effectiveness analysis of alternative candidates for the new CIS in early 1982.

(2) C² Facilities

(a) E-3A (AWACS)

The Air Force has continued to accept delivery of E-3A (AWACS) aircraft and to support and participate in the NATO AWACS program (see Part III.I).

In October 1981, 20 of the 34 programmed E-3As were operationally available to perform surveillance and warning activities in support of worldwide tactical and North American air defense missions. The most notable uses of the system during the past year have been in West German airspace in response to the crisis in Poland and over the Persian Gulf to aid Saudi Arabia. The remaining E-3As will be enhanced by upgrading their radar and computer systems and installing Joint Tactical Information Distribution System (JTIDS) communications terminals.

(b) Joint Crisis Management Capability

This program will provide theater Commanders-in-Chief with ground and air transportable C³ facilities capable of rapid deployment for use in crisis management situations and military contingency operations. The program will ultimately provide four levels of support ranging in capability from a manpack Ultra-High Frequency Satellite Communications (UHF SATCOM) terminal for minor crisis situations (Level 1) through CONUS-based C³ augmentation assets capable of supporting large-scale joint task force operation (Level 4). Level 1 equipment will be deployed by December 1982 and funds to procure Levels 2 and 3 are requested in the FY 1983 budget, leading to an initial operational capability in FY 1986.

(c) Joint Tactical Fusion Program

The Joint Tactical Fusion Program will develop automation support to correlate inputs from multiple sources and synthesize all available sensor information to provide the tactical commander an accurate and timely display of the battlefield situation. The program builds on the results derived from earlier developmental systems such as Battlefield Exploitation and Target Acquisition (BETA). The program will develop and procure an Army All Source Analysis System (ASAS) and an Air Force Enemy Situation Correlation Element (ENSCE). Development is being managed as a joint program to ensure the two systems are interoperable and that they employ the greatest commonality of hardware and software, consistent with Service-unique requirements and priorities.

(3) Information Distribution for Tactical Forces

We are developing tactical data and voice distribution systems that improve through-put capacity, security, jam-resistance and interoperability. These efforts are complementary because tactical data links permit the timely exchange of large amounts of well structured information (e.g., surveillance information among C² nodes) while voice links are required for critical information which is highly perishable and unpredictable. There are six major programs in the area of secure, jam-resistant, line of sight communications that address either one or both of these needs: the joint Army, Air Force, and Navy JTIDS

program (see Part III.C), joint Army-Marine Corps PLRS program (see Part III.A), Army Single Channel Ground-Airborne Radio System-VHF (SINCGARS-V) (see Part III.A), Air Force HAVE QUICK and SEEK TALK UHF voice radio programs (see Part III.C) and Navy ARC-182 radio. These programs differ in their projected fielding dates, operating frequencies, capability, and cost. Lethal methods are also being evaluated to complement these non-lethal jam-resistant systems. We are carefully scrutinizing all activities to ensure the composite architecture allows for required levels of inter-Service interoperability and provides the necessary technical attributes to defeat the enemy threat at acceptable levels of risk and cost.

(4) Interoperability

Significant milestones in interoperability have been achieved during the last year in the JINTACCS and TRI-TAC programs.

(a) Joint Interoperability of Tactical Command and Control Systems (JINTACCS)

JINTACCS is developing standards and performing tests to ensure selected joint Service tactical data systems are interoperable and compatible. We conducted the first operational effectiveness demonstration (OED) of joint Service intelligence systems last May in conjunction with the joint readiness exercise SOLID SHIELD 81.

(b) Joint Tactical Communications Program (TRI-TAC)

TRI-TAC made a noteworthy shift in orientation from development to production. This system promotes interoperability by permitting the Services to transition jointly from their current tactical analog equipment to a modern digital communication system that provides voice, data, and facsimile service.

c. Defense-Wide C³

The area of Defense-Wide C³ includes five major classes of systems which provide the infrastructure for navigation and position-fixing; base and support communications; common-user communications; communications security; and information systems.

(1) Navigation and Position-Fixing/ Nuclear Burst Detection and Position Fixing

The NAVSTAR Global Positioning System (GPS)/Integrated Operational NUDETS Detection System (IONDS) is expected to become fully operational by 1988. The system will provide: (1) position, velocity, and time information, and (2) geopositioning of nuclear detonations information, with unprecedented accuracy, throughout the

world under all weather conditions. The user equipment is being designed to withstand feasible enemy countermeasures and the satellites will be in dispersed, high-altitude orbits with a degree of hardening that provides for graceful degradation of coverage under presently projected threats. The IONDS component of the total system will permit rapid and accurate detection, estimates of yield and height of burst, and worldwide geopositioning of nuclear detonations (see Part III.D).

Tests have demonstrated that the NAVSTAR GPS concept is operationally feasible and that 16-meter global accuracies are achievable. The request for FY 1983 includes funding to continue full-scale engineering development of the satellites, the ground control station and user equipment, and procurement of production satellites.

(2) Base and Support Communications

We are requesting \$1.09 billion for worldwide base and support communications in FY 1983. One of the major efforts in this area is the replacement of existing obsolete telephone systems in all Services. Studies reveal that savings from the application of electronic switching in leased systems are large enough in many cases to pay for the one-time installation costs in the first year. For owned systems, the savings often pay for total equipment costs in five to ten years. In addition to the cost savings, electronic switching equipment provides features which permit better system management, reliability, and utilization.

(3) Common-User Communications

(a) Architectural Initiatives for Satellite Communications (SATCOM)

In April 1981, a new architecture for SATCOM systems was approved to provide a consistent plan for the development and deployment of space segments and associated terminal equipment. The architecture encompasses four systems which provide ultra, super, and extremely high frequency (UHF, SHF, and EHF) communications relay service to strategic, tactical, and agency users. This program includes the following systems and enhancements:

- The Military Strategic, Tactical, and Relay (MILSTAR) SATCOM program will provide EHF service to strategic and tactical users and additional UHF service for strategic users.
- The Defense Satellite Communications System (DSCS), will augment its existing SHF service with improved jam-resistance.

- The Leased Satellite (LEASAT) system will provide UHF service to tactical users, planning to begin in 1984.
- The Fleet Satellite Communications (FLTSATCOM) system will procure three additional satellites for provision of service to strategic and tactical users until MILSTAR satellites are deployed.

(b) Defense Communications System (DCS)

The DCS provides our military forces with worldwide, long-haul, common-user voice, data, and teletype service through composite networks of U.S. owned and commercially leased facilities. To support C3 needs in combat, we are pursuing options to enhance the system's interoperability with those of NATO, modernize it, and improve its survivability. Specific programs to meet these needs are discussed below.

Communications Survivability in Europe--The Digital European Backbone (DEB) is an on-going four phase program that will upgrade the DCS backbone in Europe to a more reliable, totally secure system. A related improvement to our European communications is the installation of the European Telephone System (ETS) serving U.S. forces in Central Europe. We have also directed DCA to plan to harden key European nodes. These systems will be interconnected with those of NATO and national networks to enhance the order and cohesiveness of allied forces and to use our total assets more effectively.

Automatic Digital Network II (AUTODIN II)--The AUTODIN II program is intended to provide a general purpose data communications packet-switched network for integrating the teleprocessing and record communications needs of DoD into a single digital backbone transmission system. As a consequence of our increased emphasis on system survivability and endurance, we are evaluating whether AUTODIN II remains the most attractive option for common-user data communications. Alternative options under consideration include a larger number of smaller communications nodes employed in networks such as the World Wide Military Command and Control System (WWMCCS) Intercomputer Network (WIN) and the ARPANET. Our evaluation will be completed prior to the transfer of the first operational user to AUTODIN II, now scheduled for March 1982.

Survivability of Telecommunications Networks--Presidential Directive 53 requires us to include survivability improvements for telecommunications networks under the control of the National Communications System (NCS). In FY 1983, we have funded to begin the portion of this effort under the control of DoD.

Commercial Satellite Communications--A commercial satellite project is being initiated to take advantage of newly emerging competitiveness in the U.S. telecommunications industry to provide an alternative lower cost system for long-haul communications. The Defense Communications Agency is establishing commercial satellite service to four communities of interest (COIs) in 1982, adding nine additional COIs in 1983, and achieving the interconnection of the full complement of 36 COIs in 1986. Initial savings of \$2.0 million are estimated for FY 1983 and \$83.6 million for FY 1984-87.

(4) Communications Security (COMSEC)

The objective of our COMSEC program is to deny an adversary opportunities to gain valuable intelligence by exploiting our communications systems. To achieve this objective we are procuring cryptographic equipment and implementing COMSEC measures to counter hostile intelligence efforts.

(5) Information Systems

Defense information systems consist of data processing, data communications, reporting systems, and the people who operate and manage them. A major objective of our effort in this area is to achieve interoperability among our Defense information systems, so information can be shared effectively. To achieve this end we are modernizing existing systems and developing common standards and procedures. Our major initiatives in this area include improvements to the WWMCCS Information Systems (WIS), Automated Message Handling Systems (AMHS), and computer security.

(a) WWMCCS Information Systems

The WWMCCS standard automated data processing (ADP) program provides standard computer hardware and software to support common C² needs at locations worldwide. Deficiencies in these systems include: approaching hardware obsolescence, high maintenance costs, and limited system surge capabilities required to support crisis management operations. Recent improvements in computer technology make it both feasible and economical to correct these deficiencies. We reported to the Congress in January, 1981 on our plans to modernize the WWMCCS ADP and that effort is proceeding as planned. A Joint Program Management office has been established within the Air Force to provide a single point of contact and management for the WIS modernization program. A detailed status report on the program will be transmitted to the Congress under separate cover on 1 July 1982.

The WWMCCS Intercomputer Network (WIN) interconnects 20 of the WWMCCS ADP locations. The initiatives we are pursuing with WIN include: continuation of efforts to improve reliability and operational capability; replacement of obsolete hardware and software in the communications sub-network; and installation of a Network Front End processor at each WIN site.

(b) Automated Message Handling Systems (AMHS)

AMHS provides a means to organize and quickly retrieve items from the mass of messages which flow into intelligence and command centers. An interim standard system, the National Military Intelligence Center Support Sub-System, has been in use in support of intelligence analysis since November 1979. A follow-on system to meet the needs of the C² community is being developed as part of the WIS modernization program.

(c) Computer Security

A major step in achieving multi-level secure computer systems was taken this year by establishing the Computer Security Evaluation Center (CSEC) at the National Security Agency (NSA). The CSEC will be a center of excellence in computer security techniques to develop DoD trusted computer systems and to evaluate the integrity of vendor products.

d. Electronic Warfare (EW) and C³ Countermeasures (C³CM)

EW and C³CM are employed to disrupt the performance of enemy weapons and C³ systems, and to protect friendly systems from enemy attack and disruption. These systems are subdivided into four major complementary classes: defensive electronic countermeasures (DECM); radar warning receivers (RWR); mutual support electronic warfare; and C³CM. They must be able to cope with the Warsaw Pact's proliferation and continued improvement of sophisticated counter-air weapon systems and networks. Our broad objectives are to develop and procure economically sufficient quantities of equipment to equip the tactical forces, to deploy new/improved systems to keep pace with the evolving threat, and to obtain a balanced mix of lethal and non-lethal countermeasure capabilities.

(1) Defensive Electronic Countermeasures (DECM)

In the area of DECM, emphasis is being placed on developing and procuring self-protection jammers. The major new system acquisition is the Joint Navy and Air Force Airborne Self-Protection Jammer (ASPJ), ALQ-165. Fabrication of the prototype system began in the fourth quarter of FY 1981 and developmental test and evaluation is scheduled to begin in FY 1983. Aircraft scheduled for ASPJ include the F-14, F-16, F-18, A-6E, EA-6B, and perhaps the F-111.

(2) Radar Warning Receivers (RWR)

The primary purpose of RWR systems is to warn a pilot of the types of threats that are illuminating him, their status, and their bearing so that he can perform evasive tactics. The Air Force ALR-69 will be updated using major portions of the Navy ALR-67, our newest

RWR. Future updates to both systems will be common, resulting in cost savings through larger procurements.

(3) Mutual Support EW

Our primary mutual support EW systems are the Navy's EA-6B aircraft and the Air Force's EF-111A. The Navy is planning to procure six EA-6Bs per year for the FYDP years beginning in FY 1983. The Air Force is planning to modify nine F-111 aircraft to the EF-111A configuration in FY 1983.

(4) Command, Control, and Communications Countermeasures (C³CM)

Efforts are underway to develop and procure systems that can degrade enemy operations by attacking, electromagnetically and physically, key hostile C³ nodes. As an example, FY 1983 procurement funds have been requested by the Air Force for a dedicated stand-off jamming system.

e. Intelligence Program

Intelligence activities in which the Department is involved are divided into two broad categories: the National Foreign Intelligence Program and Defense Tactical Intelligence and Related Activities (TIARA). Since specific information on these activities is sensitive, it is possible to provide only the following broad description of their dimensions.

(1) National Foreign Intelligence Program

National intelligence is vital to support force planners and developers of weapons systems. Within the Defense portion of the National Foreign Intelligence Program (NFIP), there are five programs: the Consolidated Cryptologic Program (CCP), the General Defense Intelligence Program (GDIP), the Defense Foreign Counter Intelligence Programs, and the Air Force and Navy Special Activities Programs. The Special Activities Programs provide essential information to national policymakers and to force commanders.

(2) Tactical Intelligence and Related Activities

The Tactical Intelligence and Related Activities (TIARA) aggregation consists of those DoD activities outside the NFIP that provide timely intelligence support to operational commanders. These activities are accounted for in three major categories: Tactical Intelligence, Reconnaissance, Surveillance, and Target Acquisition; the Defense Reconnaissance Support Program (DRSP); and the Tactical Cryptologic Program (TCP).

(3) Intelligence Oversight

Responsibility for independent oversight of all DoD intelligence and counterintelligence activities is assigned to the Inspector General for Intelligence who reports on such matters to the Deputy Secretary of Defense and the White House Intelligence Oversight Board. To ensure the legality and propriety of our activities, he inspects DoD intelligence elements worldwide and monitors the inspections of intelligence elements conducted by military service and defense agency inspectors general. He also conducts, directs, or monitors investigations of alleged questionable activities within the DoD intelligence community.

3. Conclusions

We have launched several initiatives that should alter significantly the evolution of our C³I system. First, we are viewing and managing the C³I-weapon system mix as a totality. The emphasis is on developing a highly survivable system which satisfies the requirements of the weapon systems they support over a broad range of feasible conflict environments. Second, we are placing greater emphasis on longer-range planning. In this planning process we are defining the mission capabilities and characteristics that are required to support national security objectives and formulating fiscally constrained system architectures to identify time-phased mixes of systems that satisfy mission needs consistent with technological capabilities. These architectures provide the mechanism required to ensure joint and combined interoperability and to ensure that our C³I systems are as survivable and enduring as the weapon systems they support. To select preferred, realistic architectural options, we are pursuing mission-oriented evaluations of the total system. Finally, we are encouraging management initiatives to improve the acquisition process. We anticipate increased use of pre-planned product improvements; common programs, to provide cost-savings through larger procurements; and procurement of sufficient quantities of critical equipment at economical rates to equip the forces.

G. MOBILITY FORCES

1. Introduction

a. Program Basis

Mobility forces are structured to meet wartime requirements for deployment, employment, and resupply of forces. This demands programs that are designed to deliver the appropriate mix of people, equipment, and supplies between and within theaters of operation. Our FY 1983-87 program funds new initiatives and enhances existing programs that will increase our capability to project and sustain our forces. These include acquisition of additional cargo aircraft, prepositioning of additional supplies and equipment, and enhancements to our sealift capability.

Our mobility programs consist of a mix of military and civilian aircraft and ships, augmented by prepositioned unit equipment and supplies. During wartime, the combat forces to be moved and the delivery schedule determine the overall mobility requirement. Both the distance to be traveled and the availability of acceptable routes have a significant effect on the mix of mobility programs that can provide for the timely deployment of forces.

Each mobility program has a distinct role in meeting the overall requirement. Airlift is fast, flexible, and sometimes the only option available in the early stages of a contingency, but it is also expensive and has a limited capacity. Sealift can move large amounts of equipment and supplies, but lacks the speed and, therefore, some of the flexibility of airlift. Prepositioning complements both airlift and sealift but is politically sensitive and less flexible. Maritime prepositioning provides an alternative to land-based programs when political considerations or the need for flexibility constrain land-based prepositioning.

(1) Objectives

Our long-term goal is to be able to meet the demands of a worldwide war, including concurrent reinforcement of Europe, deployment to Southwest Asia (SWA), and support in other potential areas of conflict. In building toward this goal, mobility forces will be acquired first to meet the intertheater and intratheater demands of each theater independently and then to meet the demands of concurrent deployment.

For the rapid reinforcement of NATO, we want the capability to deploy 6 Army divisions, a Marine Amphibious Brigade (MAB), and 60 tactical fighter squadrons --all with initial support--within 10 days. While currently available sealift resources could deliver follow-on forces and resupply, they could not meet the immediate deployment requirements for the initial combat forces and their support. Airlift could move troops and equipment within the required time, but fiscal constraints will not permit an

airlift force large enough to meet our immediate reinforcement objectives. Therefore, we rely on prepositioned unit equipment and supplies, in conjunction with airlift, to deploy the initial combat forces and some of the required support. Airlift and sealift will deliver the follow-on forces and perform the resupply operation.

Our deployment objectives for a Southwest Asian contingency are based on deterring the Soviet threat. To do this, we believe that we must be able to deploy initial light ground combat units and tactical air forces very quickly--in about a week--to occupy key positions and provide air defense. We must then be able to reinforce this initial deployment at a steady rate, completing the movement of a Rapid Deployment Joint Task Force (RDJTF) in four to six weeks. Such a deployment schedule places heavy demands on airlift and prepositioning and on early available sealift. The requirement for flexibility, together with political considerations, causes us to rely more heavily on maritime prepositioning as a complement to airlift and sealift for an RDJTF deployment than for a NATO reinforcement.

(2) Meeting the Objectives

Our FY 1983-87 mobility programs will enhance our capability to meet these deployment objectives. The additional airlift procurement we have proposed, together with improvements in sealift and prepositioning, will move us close to our goal of meeting the mobility demands for a NATO reinforcement or a Southwest Asian RDJTF deployment. Meeting our long-term goal of concurrent deployments will require further increases in airlift and fast sealift, as well as additional prepositioning.

2. FY 1983-87 Mobility Programs

a. Force Structure

Table III.G.1 summarizes our major organic mobility assets for intertheater and intratheater deployments. Not shown are the commercial aircraft and ships committed to DoD for use in time of war or national emergency. The Long-Range International portion of the Civil Reserve Air Fleet (CRAF) consists of 215 passenger aircraft and 109 cargo aircraft. Our Merchant Fleet contains 270 dry cargo ships. Of those vessels, 186 are available by charter or government contract under the Sealift Readiness Program, which operates at no direct cost to DoD. Our medium-lift helicopter programs, essential for intratheater mobility, are discussed in Part III.A.

Table III.G.1
U.S. Mobility Assets

Aircraft

<u>Active Forces Aircraft</u>	<u>Inventory</u> <u>1/</u>
C-5	70
C-141	234
C-130	218
CH-47/CH-54	316
CH-53	200

<u>Reserve Forces Aircraft</u>	<u>Inventory</u> <u>1/</u>
C-130	294
C-7/C-123	19
CH-47/CH-54	182
CH-53	200

Dry Cargo Vessels

<u>Fleet</u>	<u>Inventory</u>
Military Sealift Command	24
Ready Reserve Force	27
Other NDRF Ships <u>2/</u>	167

1/ Aircraft numbers are primary aircraft authorized (PAA) in operational squadrons.

2/ NDRF -- National Defense Reserve Fleet.

b. Assistance from Allies

Over the past several years, we have reached agreements with our NATO allies to provide about 600 NATO-registered ships and 49 long range cargo aircraft for use in a European reinforcement. Negotiations are currently under way to add passenger aircraft to the cargo aircraft already committed. Use of allied ships and aircraft would enhance our mobility capabilities in a NATO contingency and free U.S. ships and aircraft for deployment to other potential conflict areas.

c. Airlift Improvements

(1) C-5 Wing Modification

Structural deficiencies in the wings of the C-5A limit their use to 7,100 hours, which most aircraft will have accumulated within the next few years. To correct this problem, we are funding a modification program to extend the C-5's service life to at least the year 2000. The production line began in FY 1981, and all 77 aircraft in the inventory will be modified by FY 1987.

(2) Expanding Airlift Capability

The Congressionally-Mandated Mobility Study (CMMS) has documented the need for additional airlift to meet our near-term and future mobility requirements. Our FY 1983-87 program will provide much of the added airlift requirements identified by the CMMS, and it will do so as quickly as possible. The program procures additional C-5 and KC-10 aircraft and enhances the capabilities of the Civil Reserve Air Fleet (CRAF). Procuring additional C-5s and KC-10s will avoid the time and expense of developing and testing a new aircraft design and will permit us to add airlift capability with minimum risk in cost, scheduling, and performance.

To provide additional capacity for moving our large weapons systems and vehicles, we plan to accept a firm, fixed-price offer to produce 50 additional C-5N aircraft. The C-5 is our most flexible mobility resource; it is aerielly refuelable and can carry a wide mix of unit equipment to any theater. By procuring additional C-5s, we will deliver 17 more aircraft during the program period than would be possible with a new design.

The KC-10 adds both cargo and tanker capability to the force. As a tanker, it can give the C-5 and C-141 worldwide capability without intermediate basing. As a cargo aircraft, it can provide needed airlift capability. Our program funds procurement of 44 additional KC-10s.

The CRAF Enhancement program compensates U.S. commercial airlines for the additional procurement and operating expenses of wide-bodied passenger aircraft that can be converted quickly to carry military cargo. With this program, we can add cargo capability at lower cost than procuring additional military aircraft. Last year, we requested proposals from the airlines for the modification of existing aircraft to a cargo-convertible configuration. The responses were nearly twice as expensive as we had expected, and we chose not to accept them. We believe that new contracting provisions in the FY 1982 Defense Authorization Act will make CRAF Enhancement less risky for the airlines and, therefore, less costly to DoD. We intend to design a new CRAF Enhancement program based on the revised authority Congress has given us, and anticipate proposing this new program in the FY 1984 budget. Among other options, the new program will consider modifying aircraft during production (once the airlines resume purchases), which should also lower program costs.

While our FY 1983-87 program adds airlift capability at an accelerated rate, it does not satisfy entirely our future airlift requirements. As we refine our long-term requirements and design future mobility programs, we will continue to evaluate new designs, including the C-17, that enable us to increase the capability, responsiveness, operational flexibility, and reliability of our airlift forces.

(3) Additional Improvements

In FY 1982, we will complete a program to stretch the C-141 and add aerial refueling capability. These modifications will increase the C-141's lift capacity by about 30 percent and provide additional flexibility for long-distance deployments.

Our five-year plan continues several other programs to improve our airlift capability. We have programmed funds to procure additional spare parts for our C-5s and C-141s to increase their wartime utilization rates. We are also modifying the Army's fleet of CH-47 helicopters to increase their operational capability, reliability, and maintainability. This will enable us to support the Army's medium-lift helicopter requirements until the year 2000. Continued procurement of CH-53E heavy-lift helicopters will enhance Marine Assault Force ship-to-shore movements and subsequent operations ashore.

	FY 1981 Actual <u>Funding</u>	FY 1982 Planned <u>Funding</u>	FY 1983 Prop'd <u>Funding</u>	FY 1984 Prop'd for <u>Authorization</u>
<u>C-5 Wing</u>				
<u>Modification</u>				
Development:				
\$ Millions	11.0	15.6	6.9	1.6
Procurement and Installation:				
Quantity	12	18	18	24
\$ Millions	165.3	239.6	287.0	240.2
<u>C-5 Procure-</u>				
<u>ment</u>				
Quantity	--	--	2	10
\$ Millions	--	270.0	860.0	2,171.5
<u>KC-10 Pro-</u>				
<u>curement</u>				
Quantity	6	6	8	8
\$ Millions	327.0	357.4	829.1	579.6
<u>Civil Reserve</u>				
<u>Air Fleet (CRAF)</u>				
<u>Enhancement 1/</u>				
Quantity	--	--	--	4
\$ Millions	--	--	--	184.7

1/ Assumes FY 1981 and 1982 appropriations are redirected.

	<u>FY 1981 Actual Funding</u>	<u>FY 1982 Planned Funding</u>	<u>FY 1983 Prop'd Funding</u>	<u>FY 1984 Prop'd for Authorization</u>
<u>C-141 Modifi- cations</u>				
Procurement:				
Quantity	33	--	--	--
\$ Millions	119.1	47.0	--	--
<u>Increased C-5 and C-141 Utilization</u>				
Parts Procure- ment:				
\$ Millions	160.2	580.8	93.1	305.2
<u>CH-47 Moderni- zation</u>				
Procurement:				
\$ Millions	212.6	310.2	288.4	400.5
<u>CH-53 Procurement</u>				
Quantity	14	14	11	11
\$ Millions	235.3	260.8	311.0	367.2

d. Prepositioning

To meet our mobility objectives in the early days of a deployment, we have undertaken programs to preposition unit equipment, supplies, and ammunition in Europe and Southwest Asia for U.S.-based forces. Funding has been provided for both land-based and maritime prepositioning programs. With most major items of equipment prepositioned on land or on ships near the region, combat units and their residual equipment can be airlifted to the conflict area with a substantial reduction in delivery time. We are also improving intratheater transportation assets to ensure timely forward movement of prepositioned equipment.

(1) Prepositioned Materiel Con-
figured to Unit Sets (POMCUS)

Under the POMCUS program, we have prepositioned equipment in Europe for four Army divisions and numerous non-divisional supporting units. To meet our program objectives, two additional sets will be prepositioned. Construction of the fifth POMCUS site began in October 1981, and work on the sixth started in January 1982. Storage construction for both sets will be completed by the end of FY 1983.

Completion of the POMCUS program will enable us to keep our commitment to provide NATO with 10 U.S. divisions by D-Day. Several of our NATO allies have agreed to provide extensive amounts of transportation and logistics support for both forward-deployed and reinforcing Army and Air Force units. These agreements are contingent upon our 10-division force commitment. This host nation support greatly reduces U.S. mobility requirements for a NATO reinforcement and makes U.S. support units available for an RDJTF deployment to Southwest Asia.

Successful completion of the POMCUS program will depend on continued host nation support, NATO Infrastructure funding, and the procurement of required equipment. Although there has been some concern in the past about possible equipment shortages, sufficient funds have been added to the Army's five-year plan to ensure that the storage sites will be filled without withdrawing equipment from active or reserve units.

(2) Air Force Prepositioning

The Air Force will begin programs in FY 1983 to preposition equipment in Europe for a NATO reinforcement and in Southwest Asia to support an RDJTF deployment to the region. The European program will preposition equipment for tactical fighter forces. Contingent upon obtaining suitable bilateral agreements, the Southwest Asian prepositioning program will provide funds for procurement, transportation, storage, and maintenance of mobile bare-base kits, resupply, and ammunition.

(3) Marine Corps Prepositioning

We have a Memorandum of Understanding with the Norwegian government to preposition Marine equipment in Norway to assist in the defense of NATO's Northern Flank. Funds are included for procurement of initial increments of unit equipment, supplies, and ammunition for a Marine Amphibious Brigade.

Funds are also provided for the procurement of unit equipment and supplies, and for operations and maintenance expenses, to support the three Marine brigades that will be prepositioned aboard maritime prepositioning ships in the Indian Ocean.

(4) Maritime Prepositioning

Two maritime prepositioning programs have been established to store equipment and supplies aboard ships in the Indian Ocean. Under the Near-Term Prepositioning Ship (NTPS) and Enhanced NTPS (ENTPS) programs, unit equipment and supplies for a brigade-sized Marine Air Ground Task Force (MAGTF) have been prepositioned aboard dry cargo and tanker ships chartered and controlled by the Military Sealift Command. The ships also contain significant amounts of supplies, ammunition, POL, and water for early arriving Army and Air Force RDJTF units. Funding is also provided for additional depot ships for storage.

Army ammunition. These programs reduce response time to the region and provide a test-bed for future development of larger long-term maritime prepositioning efforts. The Maritime Prepositioning Ship (MPS) program augments, and will ultimately replace, the NTPS/ENTPS program. It will preposition selected unit equipment and supplies for three brigade-sized MAGTFs.

	FY 1981 Actual Funding	FY 1982 Planned Funding	FY 1983 Prop'd Funding	FY 1984 Prop'd for Authorization
<u>Army Land-Based Prepositioning</u>				
\$ Millions	146.3	179.9	491.0	488.0
<u>Air Force Pre- positioning</u>				
\$ Millions	--	--	195.0	174.0
<u>USMC Land-Based Prepositioning</u>				
\$ Millions	5.0	27.8	35.7	11.3
<u>Near-Term Pre- positioning Ships (NTPS/ENTPS) and Depot Ships 1/</u>				
\$ Millions	131.0	150.0	230.0	253.0
<u>Maritime Pre- positioning Ships (MPS) 1/</u>				
\$ Millions	19.0	139.0	329.0	494.4

1/ Includes USMC equipment acquisition and operations and maintenance costs.

e. Sealift Programs

Sealift is vital for projecting and sustaining our forces. In a large deployment, it would deliver armored and mechanized forces as well as support forces, resupply, and ammunition. Our FY 1983-87 program funds initiatives that will increase the capability and reduce the response time of our sealift forces.

(1) Fast Sealift

The requirement to move forces rapidly and maintain flexibility has caused us to look for ways to decrease the response time of sealift. Meeting this objective requires ships that can travel at high speeds and be rapidly loaded and unloaded. The acquisition and conversion of high-speed (33 knots) SL-7 container ships will allow us to deploy Army units more rapidly. Funds were provided in FY 1982 to complete acquisition of eight of these ships and to convert four of them for military use. We are requesting funds in FY 1983 to convert the remaining four.

The Navy has also programmed funds to expand the size of the Ready Reserve Force (RRF). The RRF, which is part of the National Defense Reserve Fleet, contains 27 dry cargo ships that have been upgraded to make them available for loading within 5 to 10 days after notification. We plan to increase the size of the fleet to more than 40 ships (including some tankers) by FY 1986. This program contributes to the early availability of shipping and reduces the time required to begin sealift operations.

(2) Sealift Discharge

The shift to containerization by the maritime industry has significantly increased productivity but, at the same time, has increased dependence on modernized port facilities. Deployments to Southwest Asia may require the discharge of cargo and POL in non-modernized or damaged ports or in areas that lack port facilities. To provide offload capabilities in these areas, the Army and Navy have initiated programs to offload container ships and discharge cargo and POL over the beach. These programs will enhance the flexibility of our sealift resources and increase the military utility of modern container ships.

The Navy is undertaking several programs to improve the capability of container ships and to provide mobile port facilities. It is developing a Temporary Container Discharge Facility (TCDF) that would be used to offload non-self-sustaining container ships. It is also procuring mobile piers, called Elevated Causeways, that can be installed within 72 hours. In addition to these programs, funding has been provided to replace obsolete water craft in the Army's inventory and to procure facilities to offload tanker ships and store POL and water ashore.

	FY 1981 Actual <u>Funding</u>	FY 1982 Planned <u>Funding</u>	FY 1983 Prop'd <u>Funding</u>	FY 1984 Prop'd for <u>Authorization</u>
<u>SL-7</u>				
Procurement:				
Quantity	6	2	--	--
\$ Millions	210.0	68.4	--	--
Conversion:				
\$ Millions	--	341.6	325.6	21.4
<u>Sealift</u>				
<u>Discharge</u>				
\$ Millions	--	--	64.0	187.0

H. RAPID DEPLOYMENT FORCES FOR SOUTHWEST ASIA

1. Introduction

Our FY 1983-87 programs place increased emphasis on our ability to project forces into Southwest Asia (SWA). It is our policy to support the independence of the countries in this politically unstable region, and to prevent a further spread of Soviet domination. One-third of the free world's supply of oil is produced in Southwest Asia, making it extremely important to the interests of the United States and its allies.

The continuing Soviet occupation of Afghanistan, the Iran-Iraq War, Arab-Israeli disputes in southern Lebanon, the conflict between North and South Yemen, and the Iranian attacks on Kuwaiti oil facilities exemplify the range of regional instabilities that complicate our policy and strategy. Furthermore, political conditions and agreements with our friends and allies near the region, in Europe, and elsewhere influence the availability of critical resources and transit facilities necessary to support our rapid deployment strategy. To meet the challenges of this dynamic environment, we must develop robust and flexible programs to support U.S. policy objectives.

a. Regional Geography

Chart III.H.1 depicts the SWA region. Although SWA is the focus of our rapid deployment planning, we presently maintain only a minimal sea-based presence in the area. Therefore, many of our programs necessarily include countries en route to and near that distant region.

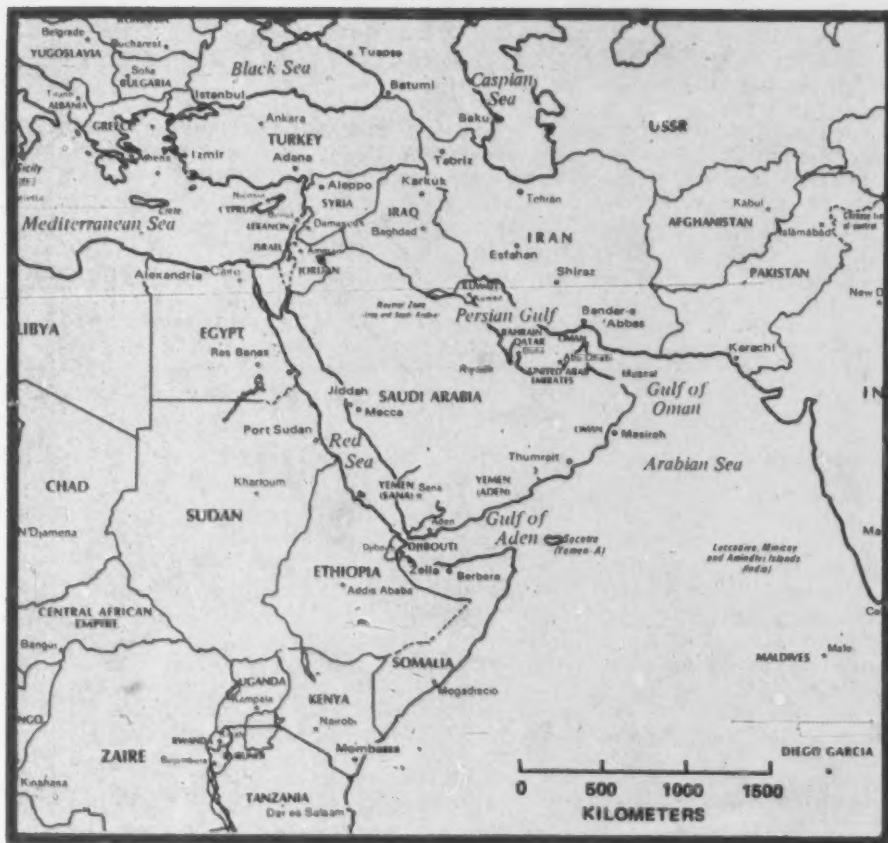
b. Potential Regional Conflicts

Our defense programs for Southwest Asia must offer capabilities across a spectrum of potential conflicts, including intraregional clashes and invasion by the Soviet Union.

Regional internal instabilities and intraregional conflicts provide frequent opportunities for Soviet intervention through proxy states or Soviet-backed sympathizers. In most cases, U.S. support would include economic, technical, political, and security assistance programs. U.S. military participation would necessarily be affected by the political sensitivities involved and could range from the provision of training, materiel, and security assistance to the employment of third-party assistance or the tailored use of military force.

An overt Soviet invasion would, of course, represent a far more demanding requirement for military force. We must be prepared to respond rapidly, and with sufficient strength, if we are to deter Soviet aggression and prevent the uncontrolled spread of hostilities.

Chart III.H.1
SOUTHWEST ASIA



c. Rapid Deployment Joint Task Force
(RDJTF)

On October 1, 1981, we chartered the RDJTF to be a separate joint task force reporting directly to the National Command Authority (NCA) through the Joint Chiefs of Staff (JCS). Furthermore, the Commander, RDJTF is now assigned operational planning responsibility for SWA only. This narrowed scope reflects our recognition of the need for a full-time major commander to develop detailed plans for the wide range of possible contingencies in the region. The current structure allows the Commander, RDJTF to plan his operations more effectively, exercise his forces, and maximize their combat readiness.

Although no new combat forces were created for the RDJTF, its commander has been given operational control over several Army units and Air Force tactical fighter squadrons. In addition, he has access to a reservoir of forces from which he could draw additional units in time of crisis, depending upon the size and nature of the contingency. While, in principle, most of our general purpose forces are in some sense available for RDJTF missions, the actual composition of the reservoir will change over time, as our ability to deploy forces rapidly and support them adequately in the region improves. Table III.H.1 depicts, in generic terms, the major types of combat forces available to the RDJTF.

TABLE III.H.1

Army

1 Airborne Division
1 Airmobile/Air Assault Division
1 Cavalry Brigade Air Combat (CBAC)
1 Mechanized Infantry Division
Rangers and Unconventional Warfare Units

Marines

1-2 Marine Amphibious Forces (MAF)^{1/}

Air Force

4-11 Air Force Tactical Fighter Wings (with support air forces)
2 Squadrons of Strategic Bombers (the Strategic Projection Force)

Navy

3 Carrier Battle Groups (CVBGs)
1 Surface Action Group
5 Air-ASW Patrol Squadrons (VP)

Headquarters

1 Army Corps Headquarters
1 Naval Forces Headquarters
1 Air Force Forces Headquarters

^{1/} A MAF typically consists of a reinforced Marine division and a Marine aircraft wing (roughly twice the size of an Air Force tactical fighter wing).

d. Southwest Asia Issues

The primary mission of the RDJTF is to deter Soviet aggression and to protect U.S. interests in SWA. For deterrence to be credible, we must be prepared to fight, thereby raising the cost of Soviet aggression to an unacceptable level. To do this, we are examining ways to increase our SWA combat and mobility capabilities by the end of FY 1987. This will require a commensurate increase in funding for readiness and sustainability, as well as improved planning, advantageous use of strategic warning, and prepositioning of supplies and equipment in the region.

Building capabilities for a SWA conflict is still a relatively new undertaking for the United States. It differs significantly from the more familiar planning and programming for a NATO/Warsaw Pact contingency. Our SWA rapid deployment strategy must consider the following unique requirements:

- sustaining a continuous combat presence in a distant region halfway around the world;
- training our combat units for operations in unfamiliar and widely varying climates and terrain;
- tailoring support for unique and austere combat operations in a region lacking support facilities (e.g., water, medical, communications, and transportation) and a highly developed infrastructure to provide them;
- developing mobility assets to deploy the RDJTF rapidly to and within SWA over extended air and sea lines of communication (ALOCs/SLOCs) and to sustain its operations in combat;
- obtaining from several other countries overflight rights and en route access; and
- securing lengthy SLOCs/ALOCs during the conflict to sustain combat operations.

Our FY 1983-87 program is designed to meet each of these requirements. Our principal program goals can be summarized quite simply:

- to improve our mobility forces and preposition adequate equipment and supplies to deploy and support an RDJTF of sufficient size to deter Soviet aggression; and

-- to provide long-term support and resupply to sustain these forces.

2. FY 1983-87 Programs

Planning and programming for the RDJTF have improved significantly over the last two years, as has our ability to project forces into SWA. Our FY 1983-87 program steps up this trend, enhancing the capability of the RDJTF and reinforcing the credibility of our intentions.

a. Unified Command for SWA

By January 1, 1983, the Commander, RDJTF will become Commander-in-Chief (CINC) of a Unified Command for SWA. Our decision to create a new command structure reflects the importance we have placed upon SWA and our ability to deter or oppose Soviet aggression in the region.

b. Combat Forces

The RDJTF will grow steadily over the next five years, adding Army, Air Force, and Marine Corps units to the reservoir of RDJTF planning forces. No new combat forces will be created specifically for the RDJTF, but RDJTF forces will need additional support and special training for their SWA mission.

c. Prepositioning

To enhance our ability to project forces into SWA, the Marine Corps plans to preposition equipment for Marine combat units aboard chartered Maritime Prepositioning Ships (MPS) beginning in FY 1984. This will augment, and eventually replace, materiel already prepositioned aboard the NTPS/ENTPS. ^{1/} When completed, the program will contain most of the equipment and supplies for three brigade-sized Marine Air-Ground Task Forces. In time of crisis, the troops and their remaining equipment would be airlifted into SWA marry-up sites to meet the MPS.

We are requesting funds in FY 1983 to preposition additional ammunition and supplies aboard other ships in or near the region. This is in addition to the MPS program and would enable the RDJTF to continue high-intensity combat operations until resupply pipelines are established.

Finally, the Air Force has initiated a program to acquire equipment that it plans to preposition in the region.

^{1/} The Near Term Prepositioning Ships (NTPS) and Enhanced NTPS (ENTPS) programs consist of 13 ships which, like the MPS program, preposition equipment and supplies primarily for Marine Corps combat units.

d. Strategic Mobility

Strategic mobility is critical to our RDJTF planning. Over the course of a conflict, sealift would be the primary provider of strategic lift in terms of tonnages delivered. However, during the critical early period of conflict, before sea lines of communication are established, airlifts and prepositioning would be our primary means of rapidly deploying and sustaining combat forces. At present, our ability to project the RDJTF rapidly into SWA is constrained by inadequate airlift and sealift resources.

To meet our early force projection and resupply needs, we have placed high priority on improving our airlift capability. We are pursuing three courses of action: (1) procurement of additional C-5 cargo aircraft and KC-10 cargo/tanker aircraft early in the program; (2) continued improvement of current airlift aircraft (e.g., C-141 stretch/aerial refueling modification, C-5 wing modification, and procurement of additional spare parts); and (3) acquisition of additional capacity through a restructured Civil Reserve Air Fleet (CRAF) Enhancement program.

To improve our sealift capability, we have placed a high priority on converting the eight SL-7 fast sealift ships procured in FY 1981-82 to a roll-on/roll-off (RO/RO) configuration. These high-speed (33-knot peak) ships could be used to transport heavy forces to any theater, but we would expect them to be extremely useful should we have to transport equipment to SWA.

Due to the limited availability of ports and airfields in the region, the adverse geographic and climatic conditions, and the extremely limited surface transportation network, intratheater transportation will be critical to our success in SWA. Without adequate intratheater airlift, sealift, and ground transportation networks, we could be forced to concentrate in less defensible locations near major airfields and seaports, rather than in key defensive positions of our choosing. We must also develop an efficient and effective capability to interface our strategic and tactical lift systems. We have selected deployment units and mobility improvement programs with these considerations in mind.

Since our sealift and airlift forces enhance our mobility capabilities in general, rather than for one specific theater, they are discussed in detail in Part III.G.

e. C³I Support

Effective command, control, and communications (C³) systems are critical to each stage of the RDJTF's mission: predeployment, deployment, employment, and post-deployment. Furthermore, our ability to gather intelligence will remain essential for strategic warning.

Early in the period, we plan to procure advanced communications equipment to ensure that the RDJTF

Headquarters has the means to control its subordinate components. We expect to increase manning levels for the communications element supporting the RDJTF Headquarters and have funded critical enhancements to the Services' C3I capabilities. These include a communications package for Air Force base operations, high frequency radios and tactical facsimile equipment for the Army, and shipboard communications upgrades for the Navy. Furthermore, the program continues procurement of tactical communications equipment. These and other ongoing programs in positioning and navigation, airborne warning and control, and tactical data distribution will significantly improve RDJTF C3I capabilities.

Intelligence support for the RDJTF is a formidable problem given the extreme distances and likely dispersion of forces in SWA. Initiatives are being taken to provide funding for the near-term purchase of responsive, lightweight, and maintainable reconnaissance and communications equipment for RDJTF-designated units.

f. Facilities Access

We must rely heavily on airlift and sealift to deploy and sustain RDJTF forces in SWA. This creates a particular challenge to protect them en route, primarily against Soviet submarine, fighter, and long-range bomber/cruise missile threats. Our maritime forces are already spread thin and, for the most part, may be the only presence we have in the region during peacetime and at the outbreak of hostilities. To alleviate some of our current shortfalls, we are expanding our initiatives for joint-service actions in SWA (for example, examining the use of land-based tactical aircraft for regional air defense over the ocean areas and the Persian Gulf). We are also continuing to seek access to facilities along the ALOCs and SLOCs, to and within SWA, from which to support our forces more adequately.

En route access provides facilities and support for airlift and sealift, as well as locations for conducting air-based antisubmarine and maritime patrol aircraft operations. Furthermore, en route access includes overflight rights necessary to shorten flight times to the region.

Intratheater facilities access, such as airfields and debarkation ports, provides for the reception of incoming RDJTF units, allows early link-up with heavy equipment arriving by sealift, and provides sites to stockpile supplies for the sustainment of combat operations.

We have reached agreement with several nations, and are pursuing negotiations with others, for access to regional facilities during crises or for routine training exercises during peacetime. In some cases, it has been necessary to improve the existing facilities and infrastructure. Construction at these sites was initially funded in FY 1981-82; we plan to complete all currently programmed projects by the middle of the program period.

Our SWA-related military construction program for FY 1983-87 totals nearly \$1.4 billion, a 30 percent increase over last year's funding levels.

It is important to note that we are not creating any new U.S. bases, per se, in SWA. Rather, we are improving existing facilities that we might use in crises or for peacetime exercises and are arranging for prompt access when needed.

Egypt has offered to allow U.S. forces access to its facilities at Ras Banas on the Red Sea, where we plan to upgrade the airfield and port facilities and construct a cantonment. Apart from routine exercises with Egyptian forces, however, we will maintain no peacetime military presence in Egypt.

By agreement with the United Kingdom, we are upgrading facilities at Diego Garcia to increase the airfield capacity and to improve its port facilities.

We are also seeking agreement with Portugal to improve the capability and fuel storage capacity of Lajes Air Base in the Azores.

We have reached agreement with Oman permitting the improvement of selected facilities for our use, primarily during crises, but also in peacetime. These improvements include upgrading runways, taxiways, and aprons and constructing support facilities for personnel and maintenance. Because of Oman's critical strategic location, these facilities could be very important for sea control and support of naval forces.

The Government of Kenya has agreed to allow U.S. forces access to airfield and port facilities at Mombasa where our plans include upgrading the airfield and dredging the harbor. Mombasa is useful for maintenance and refueling of our ships as well as for crew rest and liberty.

We have concluded an agreement with Somalia that gives us access to Mogadiscio and Berbera, seaports and airfields near the strategically important outlet of the Red Sea at the Bab Al Mandeb. The agreement provides facilities for routine fleet support and maritime surveillance operations.

g. Readiness, Equipment, and Training

To increase the operational readiness of the RDJTF, we will continue to maintain a naval peacetime presence in the region, procure additional equipment for our forces, and conduct a wide range of joint-service exercises both in the region and in CONUS.

U.S. naval and marine forces--including carrier battle groups and marine amphibious units--are routinely on station in the Indian Ocean. We expect to maintain this presence, at least for the foreseeable future, until we can gain access to regional facilities that will

help support our peacetime presence and permit the surge of RDJTF forces if necessary.

The RDJTF may have to operate in both mountain and desert terrain in SWA--two demanding yet different environments. Force requirements vary accordingly from mobile light infantry to mechanized units. Both the Army and Marine Corps are evaluating their lightweight equipment needs and are streamlining their force structure to increase the strategic mobility of our ground forces while maintaining their combat power.

The RDJTF's ability to conduct effective combat operations in SWA is enhanced through combat exercises in and out of theater, as well as through communications and logistics exercises and wargaming. We have planned for a wide range of RDJTF-oriented exercises--such as BRIGHT STAR, GALLANT KNIGHT, and GALLANT EAGLE--to be conducted both in and out of SWA. In the BRIGHT STAR 82 exercise (November and December 1981), our joint forces conducted varied operations in Egypt, Oman, Somalia, and Sudan. Expanding upon the previous year's brigade-sized exercise, BRIGHT STAR 82 included participation by Army units, a Marine amphibious unit, and supporting Air Force elements. These exercises successfully demonstrated our substantial capabilities, while identifying several shortcomings for future correction. In addition to these exercises, the Services are independently emphasizing RDJTF-related training. Table III.H.2 summarizes recent and projected RDJTF-related exercises.

TABLE III.H.2

Selected RDJTF-Related Exercises

<u>Exercise</u>	<u>Frequency</u>	<u>Location</u>	<u>Description</u>
GALLANT KNIGHT	Annual	Ft. Bragg, NC	CPX; RDJTF Specific
BRIGHT STAR	Annual	SWA Region	Joint Service; CPX/FTX; RDJTF Specific
GALLANT EAGLE	Annual	CONUS	FTX/CPX; RDJTF Specific
BOLD EAGLE	Biennial	Eglin AFB, FL	Joint Service; CPX/FTX
BOLD STAR	Biennial	Ft. Hood, TX	Joint Service; CPX/FTX
Rapid Deployment Readiness Exercises	3/Year	Varies (CONUS)	Alert Exercise Deploys HQ RDJTF

h. Support

The possibility of conflict in SWA dictates that we move rapidly to fill critical shortages in our support forces. Particularly important is meeting requirements for special equipment and for transporting supplies over lengthy land LOCs. Because RDJTF support requirements are so important and demanding, we are examining a wide range of near- and mid-term options to improve our capabilities, including asking our allies to assume a greater share of the support burden in NATO, upgrading our reserve units to permit their rapid deployment, and expanding regional prepositioning. Also, the Navy is evaluating proposals to satisfy hospital ship requirements for the RDJTF.

3. Summary

Our FY 1983-87 defense program clearly recognizes the importance and urgency of RDJTF programs to support our SWA strategy. Events of the past few years have underscored the need for the United States to play a major role in protecting our interests, as well as those of our allies and other friendly nations, throughout the region. Our program provides real capabilities to protect those vital interests--with force if necessary. By the end of the five-year period, we expect to have an independent unified U.S. command for SWA and a combat-ready force capable of rapidly deploying and sustaining several ground divisions with appropriate naval and air support.

We are continuing to evaluate and strengthen all aspects of our RDJTF program. In many cases, we have had to make some very difficult decisions, especially about command organization, force structure and size, and mobility. We will continue to exercise the RDJTF in the region to show our commitment and capability, while accumulating valuable experience for our forces. We will continue to work closely with the State Department to build closer and more cooperative relationships with SWA regional states and to integrate our programs as smoothly as possible with whatever host nation support may be available. We are confident that our defense program for SWA is well designed, and will give it the highest priority necessary to ensure its implementation.

I. NATO PROGRAMS

1. Program Basis

While NATO's importance in deterring hostile assaults on Western security interests is unquestioned, its long-term effectiveness is threatened by the steady buildup of Soviet military capability. The Reagan Administration has moved quickly to accelerate U.S. defense programs with the goal of slowing and ultimately reversing the adverse trends. We also have been working with our allies to help improve the Alliance's defensive capabilities across the board and to accelerate key programs.

The Administration has continued to urge the Allies to implement more fully the NATO force goals and to resolve key deficiencies in the overall defense posture of the alliance. Central to this effort is the Long-Term Defense Program (LTDP), an initiative for improving NATO defenses. We consider the LTDP an important element of NATO's efforts to improve and modernize its forces, and we will continue to press for its forward movement. As a basis for these necessary improvements, the Allies have reaffirmed their goal of a three percent annual real increase in defense spending and have agreed to give emphasis to more precise measures of performance.

But the threat to NATO is not manifest only within the traditional treaty area. Soviet pressures and activities in the Third World increasingly have come to threaten NATO's vital interests, particularly in Southwest Asia--the source of much of the West's oil. While the United States has a global military capability which is unique within NATO, other member nations also deploy rapid-reaction forces of very high quality. We encourage and welcome efforts by other allies to complement U.S. military, economic, and political activities and to facilitate our common defense efforts by providing en route facilities, overflight privileges or logistics support. We are also pursuing allied agreement on appropriate measures to compensate for the possible diversion of forces from European defense to the Rapid Deployment Joint Task Force (RDJTF), and to provide service support for U.S. forces deployed in Europe. The latter is particularly vital to our effort to strengthen the RDJTF without reducing deployed U.S. units in Europe or our capability to reinforce U.S. and allied forces.

2. Program Description

a. NATO Long-Term Defense Program (LTDP)

The Long-Term Defense Program--adopted by NATO in 1978 to correct certain major deficiencies in its defense posture--adds a needed dimension to NATO force planning. It provides a detailed program of improvements in ten high-priority functional areas and it is designed to project NATO defense planning into a long-term framework as

well as to increase the cost-effectiveness of alliance programs through greater coordination and cooperation among national programs.

The 10 priority program areas of the LTDP would:

- Enhance readiness through increased force responsiveness, modernized armor and anti-armor capabilities, better defense against chemical warfare, and cooperative development of common families of anti-armor and air-delivered weapons;
- Improve rapid reinforcement by accelerated movement of significant combat power to the forward areas in the early phase of a crisis, by improved passenger and cargo airlift and sealift, and by better arrangements for the reception and forward movement of reinforcements;
- Strengthen the reserve forces and mobilization programs. Certain European allies are being asked to create additional reserve combat brigades; others are required to bring their reserve forces up to NATO standards in personnel and training, and all need to upgrade the availability and responsiveness of their reserve forces;
- Improve maritime posture by strengthening C³, air defense, anti-submarine warfare (ASW), mine warfare, and surface warfare through the introduction of improved sensors and weapons systems;
- Improve the integrated air defense of NATO by augmenting identification capabilities, the information distribution system, air command and control, interceptor capability, and surface-to-air missile (SAM) defenses;
- Provide integrated or at least interoperable communications, command and control through completing the NATO Integrated Communications System (NICS), accelerating interoperability of tactical-area communications systems, improving communications security and interconnection of national and NATO communications, sharing national and NATO satellites, and enhancing NATO command and control systems;

- Provide improvements in NATO's Electronic Warfare (EW) capability and its capacity to counter the Warsaw Pact EW threat, particularly in the areas of land force EW units; EW protection for Army and Marine units and tactical aircraft and combat vehicles and troops; threat alert receivers, chaff, decoys, jammers, and expendable drones; and information and alert distribution systems;
- Rationalize procedures for armaments cooperation through such systems as the NATO Armaments Planning Review (NAPR) and the NATO Periodic Armaments Planning System (PAPS);
- Improve logistics coordination and readiness through such techniques as harmonizing of logistics arrangements, enhancing logistics coordinating capabilities and staff support in military and civil staffs, building war reserve stocks of fuel and ammunition, improving storage facilities, and increasing host nation support; and
- Improve the tactical nuclear force primarily through modernizing long-range tactical nuclear forces.

b. Host Nation Support (HNS)

United States forces allocated to Europe lack some of the logistics support structure they would need to conduct sustained wartime operations. Moreover, NATO rapid reinforcement initiatives should, by the mid-to-late 1980s, almost double the number of U.S. Army divisions that could be present in the theater on D-Day. A major concurrent deployment of U.S. combat forces to Southwest Asia must now be a planning assumption; and logistic demands would be greater in that theater with reasonably assured levels of local support far less than in NATO. As a result there would be even fewer U.S. support forces available for Europe. If we are to maintain a viable conventional defense capability in Europe and SWA, we must therefore, obtain bilateral agreements for host nation wartime support of U.S. forces.

The United States has reached agreement with several allied countries on various types of HNS they will provide, and we are discussing our needs with other countries, as well. Negotiations have been progressing well and a number of additional arrangements are expected to be completed in 1982.

c. European Military Construction for
the United States and the NATO
Infrastructure Program

The NATO infrastructure program is intended to fund facilities for NATO joint or common use. However, projects for use by a single nation's forces are eligible when those forces are committed in support of NATO missions. For example, infrastructure funds can be used for U.S. airfields in Europe, where one or more squadrons of NATO support aircraft are stationed or have firm dates for deployment. Another example is the most recently approved Reinforcement Support Category (RSC) of Infrastructure, under which facilities are NATO funded for the prepositioned storage of equipment and materiel for external reinforcement forces. Included are storage of such items for their sustainability in combat.

There is a considerable backlog of unfunded military facilities required for U.S. forces in Europe calling for both U.S. national funding (e.g., barracks) and NATO infrastructure common funding for operational facilities in support of NATO missions. Both these backlogs have adverse implications for the readiness of U.S. forces.

The 14 existing categories approved for infrastructure funding include facilities for the operational requirements of airfields, naval bases, POL fuel pipelines and storage, automated C³, the NATO Integrated Communications Systems (NICS), air defense systems, war headquarters, missile launch sites, secure nuclear warhead storage, forward tactical storage sites, navigation aids, warning installations, certain multi-national training facilities and the RCS category covering reinforcing forces.

Thirteen NATO nations currently contribute to cost-sharing NATO infrastructure projects, 14 when France participates. National commitments, based on long established cost-shares, are made in the progressive steps of a five-year fund ceiling; annual project priority lists, called slices, and in authorization of NATO funds to permit the individual nations acting for NATO to proceed with construction effort.

A key factor in all NATO infrastructure decisions is the involvement of direct or eventual financial commitments. All decisions on infrastructure, in the various NATO committees at all levels, must be unanimous. Therefore, each country has an equal voice in agreeing to an infrastructure program or to funding on a given project, with full awareness that others have the same prerogative about their own projects. The give-and-take factors normally result in timely resolution of most problems.

In recent years, NATO infrastructure planning and military prioritizations for programming have been closely tied to new and updated demands of the LTDP. One significant result is the establishment of the new RSC.

We have also taken steps to integrate planning and budgeting for infrastructure and related U.S. national construction programs. Our efforts have focused upon:

- sorting U.S. and NATO priorities;
- determining and justifying funding sources;
- phasing coordination between infrastructure and U.S. funding for facilities not eligible for NATO;
- giving advance notice of U.S. priorities to host countries having mixed U.S. and NATO infrastructure funded requirements; and
- recouping U.S. funds from projects previously prefinanced by the United States.

Although the rate of NATO infrastructure programming has increased sharply in recent years and is now established at 85 percent above previous years, this still is not adequate. Considering there are unfulfilled priority needs far beyond the agreed level, the United States is actively supporting a Supreme Allied Commander, Europe (SACEUR) and Supreme Allied Commander, Atlantic (SACLANT) request for a substantial increase as soon as possible.

Ironically, the recently achieved NATO success in accelerating implementation and completion of previously approved projects has produced shortfalls for most NATO nations in budget estimates applied to payments on past commitments. This has posed additional problems for some countries which will require special action for necessary adjustments. However, we hope these problems will be surmounted in the forthcoming review of the infrastructure ceiling.

d. NATO Arms Cooperation

For a number of years there has been a growing recognition of the opportunities presented by closer arms cooperation among NATO Allies. The opportunities lie in two areas--improved combat effectiveness and a more beneficial use of scarce defense resources. Improvements to combat effectiveness result from the ability of mutually supporting allied forces to have supplies and equipment that are interoperable or standardized, e.g. aircraft refueling and rearming at other than their home bases, and tanks drawing ammunition from adjacent units across a national corps boundary during a combat engagement.

Resource savings assume special importance when viewed in the context of a Soviet research and development effort roughly twice that of the United States. That gap can be reduced by the contributions of our NATO partners, but only if the degree of duplication is reduced and the aggregate effort is channelled in a rational manner.

The Reagan Administration subscribes to the need for greater arms cooperation and has endorsed the approaches developed in recent years toward that objective--e.g., general memoranda of understanding, the families-of-weapons approach and dual production.

(1) General Memoranda of Understanding

The United States has signed a series of reciprocal procurement agreements with 10 NATO Allies along the lines of arrangements already in effect with Canada. These MOU aim to remove artificial barriers to trade in defense equipment and are based on the principles of competition and reciprocity. Early indications are that these agreements have succeeded in fostering trade between the United States and its industrialized NATO partners.

(2) Families of Weapons

This concept offers an excellent opportunity to avoid duplicative costs through a mechanism of allocating development responsibilities for specific items of a group, or "family," of related weapon systems among interested allies. In this manner agreement has been reached that, for the family of air-to-air missiles, the United States would pursue the development of a medium-range weapon while the United Kingdom and Germany would collaborate on the short-range version. While not all systems lend themselves to this approach, a number do and discussions are being conducted with regard to antitank guided weapons, air-to-ground munitions, naval mines and mine counter-measures equipment.

(3) Dual Production

For systems well along in national development or production, dual production agreements provide an opportunity for nations to acquire systems for their own forces and to involve their defense industries in the production process. Arrangements of this kind are becoming more common as governments seek to offset the adverse effects on national industrial bases of adopting systems developed off shore. Besides national political and economic considerations, dual production offers alliance-wide benefits of interoperability and second sources of defense equipment, which could prove critical in times of hostilities.

Among systems currently in dual production are:

(a) F-16 Fighter Aircraft

The F-16 program satisfies NATO mission requirements for a light-weight, high-performance, multi-mission fighter that can perform a wide range of tactical air warfare tasks. Four European governments--Belgium, Denmark, the Netherlands, and Norway--are participating with the United States in the F-16 Multinational Configuration Control Board.

(b) AIM-9L SIDEWINDER Air-to-Air Missile

This missile is under production in Europe by a four-nation, German-led consortium Germany, Norway, Italy, and the United Kingdom.

(c) Forward-Looking Infrared Seeker for Missiles (MOD FLIR)

Germany and the United States will co-produce this module, which can be employed in a number of systems, both for its own use and for sale to other nations.

(d) 120mm Tank Gun

In 1978, the United States selected the German 120mm smooth-bore tank gun for future incorporation into the M-1 tank. The gun is being produced in the United States under German license. Initial delivery of the M-1 equipped with the 120mm gun is currently scheduled for 1985.

(e) Armor Machine Gun

The U.S. Army adopted the Belgian MAG-58 to replace the M219 machine gun on the M48 and M60 series tanks. Designated the M240, it also will be incorporated on the M-1 tank and on the Infantry Fighting Vehicle. A U.S. production facility has been constructed and initial delivery will commence in mid-1982.

(f) Squad Automatic Weapon (SAW)

Following competitive evaluation of several candidates, the U.S. Army and Marine Corps selected the Belgian FN MINIMI (XM 249) to proceed to the maturation phase in its squad automatic weapon program.

(g) AV-8B

The United States has developed this improved version of the British HARRIER Vertical and Short Take-off and Landing (V/STOL) aircraft. Under an agreement signed in July 1981 the United Kingdom will co-produce 60-100 aircraft for the Royal Air Force and provide engines and other components for those procured by the U.S. Marine Corps.

Some prospective candidates for future dual production are:

(h) NATO SEASPARROW Surface Missile System (NSSMS)

The development of NSSMS began in 1968 as an international cooperative venture involving

five NATO nations along with the United States. The system includes a fire control system, a launcher, and a variation of the SPARROW missile which provides point defense for numerous U.S. Navy and Allied ships.

(i) The Rolling Airframe
Missile (RAM)

This system is designed to augment other ship point defense systems with increased firepower. Germany, Denmark, and the United States are in joint full-scale development of the RAM program based on a 1979 MOU.

(j) PATRIOT Surface-to-Air
Missile

Six European nations have signed an MOU with the United States for the purpose of acquiring PATRIOT as a replacement for NIKE HERCULES as a high-altitude air defense system. The NATO PATRIOT Management Office is conducting a survey of European production capability to determine whether the system can be produced in Europe.

(k) STINGER Surface-to-Air
Missile

Discussions are underway with Germany on the subject of an MOU for European production of this air defense system, which can be carried by an individual soldier.

(4) Other Cooperative Programs

(a) NATO Airborne Early
Warning and Control
(AEW&C) Program

This program is the most significant cooperative acquisition effort NATO has achieved to date. The NATO AEW&C Program includes acquisition of 18 E-3A AWACS aircraft; the United Kingdom's contribution of 11 NIMROD aircraft; modifications to make a number of European ground radar sites compatible with the AEW&C aircraft; and construction at several European air base facilities to accommodate the NATO AWACS aircraft. The interoperable "mixed force" of NATO-owned E-3As and the United Kingdom's NIMROD aircraft will greatly increase Alliance detection, warning, and control capabilities to defend against low-altitude air attacks. The NATO AEW&C force will achieve an initial operational capability in 1982.

The procurement contract for NATO's acquisition of 18 E-3As has been signed and the first operational aircraft was delivered to NATO in January 1982. Nations are working on a MOU for follow-on operations and support, and preparations of the main NATO E-3A base at Geilenkirchen, Germany are well underway. In anticipation of delivery of the first operational aircraft to NATO in early 1982, crews from many Alliance nations have been

training in the United States to learn how to maintain, fly, and operate the E-3A system.

This unprecedented 13-nation cooperative program is a clear demonstration of the vitality and commitment of the alliance members to work together to improve defense capabilities. With the NATO AEW&C force in place, NATO will gain distinctive advantages in all-altitude surveillance, warning, and control, and will be in a much better position to deny a surprise air attack capability to Warsaw Pact forces.

(b) Multiple Launch Rocket System (MLRS)

This NATO Cooperative Project includes a U.S. developed basic system, British and French financial contributions, and a German developed scatterable mine warhead. A supplemental MOU establishing a joint development program for a terminally guided, anti-armor warhead was signed in September, 1981. The four participating nations are negotiating a production supplement to the basic MOU.

(c) Multi-functional Information Distribution System (MIDS)

MIDS is currently a conceptual program to perform communications/navigation/identification (CNI) functions via JTIDS technology. It will include both NATO-wide and national MIDS applications.

(d) NATO Air Command and Control System (ACCS)

ACCS is a very large new program that will integrate all of the offensive and defensive C³ for air operations in NATO. It will tie together the following systems into one large, coherent command and control structure: NATO Air Defense Ground Environment (NADGE); NATO Airborne Early Warning (NAEW), Multi-functional Information Distribution System (MIDS); and offensive C² systems.

(e) U.S. RAPIER

In an innovative step, the United States will procure RAPIER air defense systems for the close-in protection of the air bases used by the United States in the United Kingdom, while the United Kingdom will man and operate the RAPIER systems. U.S. air bases in the United Kingdom must be protected from low-altitude attack. This arrangement will be precedent-setting for NATO in that a Host Nation will provide manning for the operation of air defense at U.S. facilities.

(f) NATO SEA GNAT

This research and development project is being conducted under a MOU among Denmark, the United Kingdom and the United States under the NATO Naval Armaments Group.

(5) NATO Armaments Planning and Cooperation(a) Periodic Armaments Planning System (PAPS) and NATO Armaments Planning Review (NAPR)

The PAPS, adopted by NATO in October, 1981, introduced cooperative procedures into the pre-feasibility and feasibility phases of the life cycle of weapon systems. PAPS provides a means of encouraging cooperation early in system development.

The NAPR, approved by the Conference of National Armaments Directors in October 1979, is based on national armament replacement schedules and on military assessment of the required level of standardization by the major NATO Commands. Results of analyses will assist nations in identifying opportunities for cooperation.

3. Defense Burdensharing

Developing assessments of how the NATO defense burden is shared is particularly difficult. Some contributions that enhance allied security are not readily quantifiable and/or have not been widely publicized, while others are easy to quantify yet can be misleading if used in isolation. For example, the United States devotes over five and one-half percent of its gross domestic product (GDP) to defense compared to an average of about three and one-half percent for the rest of the Alliance. While this may appear inequitable, other measures of burdensharing must be considered in order to make a fair evaluation. The following are among the most salient of these considerations.

The NATO allies maintain about three million men and women on active duty compared with about two million for the United States. If we include reserves that have specific assignments after mobilization, the allied total is over six million compared with about three million for the United States. If we add civilian defense manpower to the combined active and reserve figures, the totals come to around seven and one-half million for the allies and over four million for the United States. NATO allies account for more than 60 percent of total Allied ground combat capability, some 55 percent of the tactical air force combat aircraft and about 50 percent of the total tonnage of naval surface combatants, including aircraft carriers and submarines.

Germany and the other European Allies which rely heavily on conscripts feel traditional comparisons of total defense spending understate their efforts and ignore the political cost of conscription that we in the United States have chosen not to impose on our youth.

National commitments cannot be measured in terms of defense outlays and resource commitments alone. Since Western Europe is the potential battlefield in a NATO/Warsaw Pact confrontation, our allies contribute the entirety of their civil infrastructure to the potential war effort.

Because land is comparatively plentiful in the United States, we tend not to be highly sensitive to the burden of allocating national land for military purposes. In Germany--where population density is 10 times greater than in the United States and the average per acre value of real estate used for military purposes is over 80 times as costly--land allocation is a burden of some concern. The estimated current fair market value of all German land devoted to military use is over \$80 billion compared with less than \$30 billion for all U.S. real estate allocated to military purposes.

Non-military economic assistance to under-developed countries is not included in the NATO definition of defense spending. A number of European allies consider it an important share of their contribution to world security and stability. Germany's large economic aid program for Turkey, for example, contributes significantly and directly to the Alliance's strength and well-being. If Official Development Assistance (ODA) as computed by the Organization for Economic Cooperation and Development (OECD) is included as a contribution to international security, the disparity between U.S. and allied contributions is reduced, Norway spends 0.93 percent of GDP for ODA, the Netherlands 0.93 percent and Denmark 0.75 percent, while the United States ranks much lower (above only Italy) with 0.20 percent of GDP devoted to foreign economic assistance.

A variety of related factors affect national perceptions of the relative burden and these shape responses to appeals for increased defense spending. These factors include competing economic demands, varying governmental approaches to the budgetary impact of social programs, and such specifics as German expenses to assure West Berlin's security and economic viability.

An examination of long-range historical trends in a number of major burdensharing indicators e.g., total defense spending, total defense spending as a share of GDP, total military and civilian manpower, indicates that several of our NATO allies in the aggregate, steadily assumed more of the burden over the past decade. For example, U.S. real defense spending during 1971-79 declined by an average of around two percent per year, as compared to a two percent per year increase for the non-U.S. NATO allies. However, now the U.S. share of the alliance burden may be on the increase again, with U.S. real increases for

1980 and 1981 estimated on the order of five percent each year compared with non-U.S. NATO increases of somewhat less than three percent.

Despite many resource-driven problems, NATO is making progress. We have received agreement, in principle, from Germany, the United Kingdom, and the Benelux Countries for comprehensive wartime Host Nation Support, which would relieve the United States of support functions and allow us to concentrate our stationed and reinforcing troops on combat roles. Norway also has taken a significant and important step in supporting prepositioning for U.S. reinforcements in the Northern Region. We also have been successful in increasing both the size and the spending rate of the Infrastructure Program, NATO's largest common funded arrangement.

4. Conclusion

In view of the changing nature of the Soviet threat, I am convinced that all the allies, including the United States, can and should do more if the Western democracies are to survive the challenges of the 1980s. As the leader of such a collective defense effort, the United States must demonstrate clearly our own resolve and high level of commitment in order to foster the cooperative approach that will continue to be needed from our allies.

J. RESEARCH, DEVELOPMENT, AND ACQUISITION

1. Introduction

a. Overall Assessment

The goal of research, development, and acquisition (RD&A) is the deployment of affordable and reliable weapons and supporting systems in the quantity and quality needed to give our servicemen and women the means to accomplish their missions. Today's combat personnel face increasingly capable enemy forces in essentially every mission area.

In the long-term, the challenge will certainly increase. Charts III.J.1 through III.J.3 compare projected military expenditures of the Soviets and the United States in a number of mission areas. Although the comparisons of expenditures are approximate, they are indicative of trends or changes in the size of the effort over the years. While it is not our aim to engage in an investment race with the Soviets, the scale of Soviet expenditures on military equipment and technology is narrowing our flexibility. This buildup demands careful planning of the modernization of our forces in each category of military capability.

b. Research Development and Acquisition Objectives

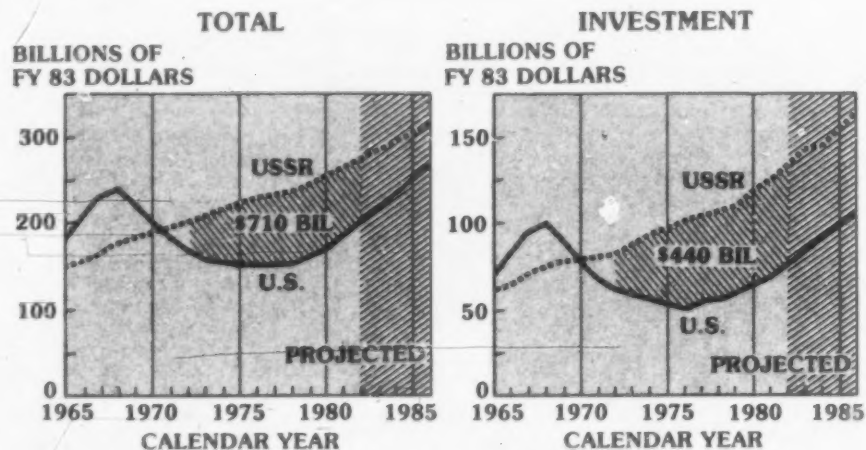
Research, development, and acquisition planning is dedicated to the following objectives:

- to modernize our forces with increasing emphasis on the procurement needed to correct critical imbalances,
- to enhance system survivability and enduring C³I and to provide necessary replacement weapons for those nearing the end of their useful life;
- to increase program stability and reverse trends leading to lengthy acquisition processes, increasing real costs, and unreliable performance; and
- to strengthen our industrial base and enhance the technological base.

We have initiated several specific actions in support of these objectives. Greater accountability and decentralization of RD&A management has been established to include reorganization of the Office of the Under Secretary of Defense for Research and Engineering to focus on integrated mission area planning. Acquisition process improvements have been initiated to reduce costs, shorten acquisition time, and simplify the deliberations of the Defense

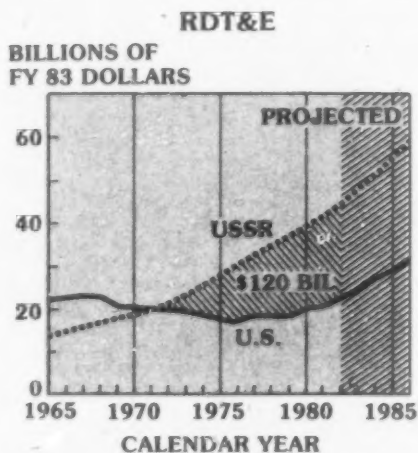
CHART III.J.1

MILITARY EXPENDITURES: A COMPARISON OF U.S. MILITARY EXPENDITURES WITH ESTIMATED DOLLAR COSTS OF SOVIET EXPENDITURES (EXCLUDING RETIREMENT PAY)



NOTES:

- (1) INCLUDES RDT&E, PROCUREMENT AND MILITARY CONSTRUCTION
(2) INCLUDES NON-DoD-FUNDED DEFENSE PROGRAMS



NOTE. INCLUDES NON-DoD-FUNDED DEFENSE PROGRAMS

CHART III.J.2

**(U) STRATEGIC FORCES: A COMPARISON OF
U.S. PROCUREMENT COST WITH ESTIMATED
DOLLAR COST OF SOVIET PROCUREMENT**

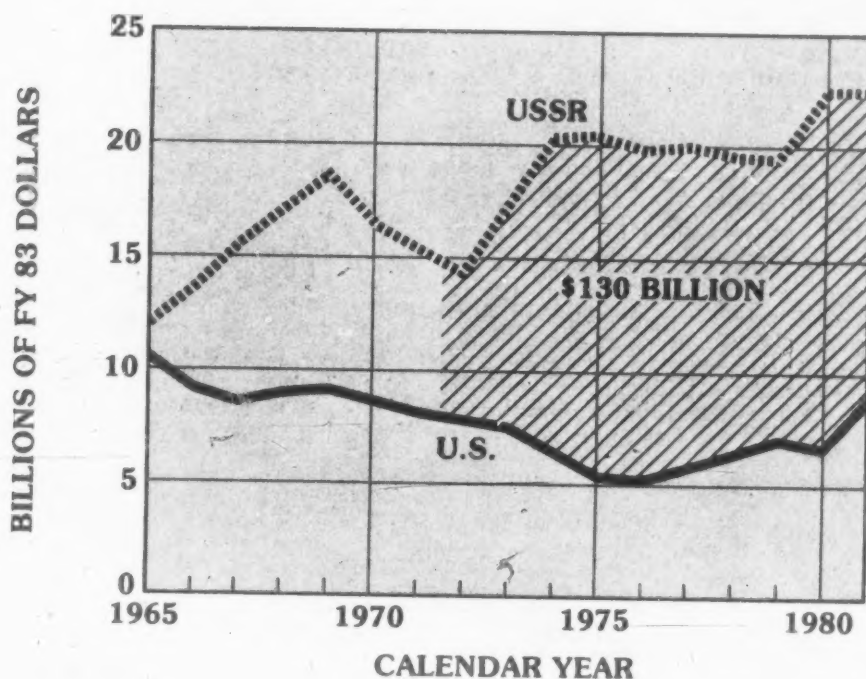
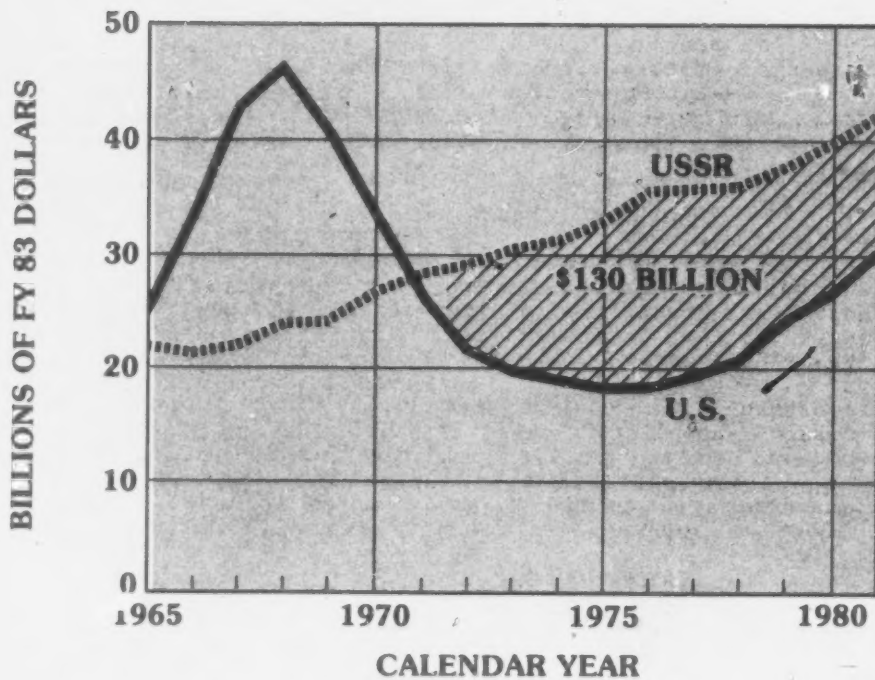


CHART III.J.3

**(U) GENERAL PURPOSE FORCES:
A COMPARISON OF U.S. PROCUREMENT COST
WITH ESTIMATED DOLLAR COST OF SOVIET
PROCUREMENT, 1970-1981.**



Systems Acquisition Review Council (DSARC). Common to most of our initiatives is our effort to improve stability of our weapons systems programs and our long-range resource planning, thereby establishing a comprehensive and coherent defense acquisition strategy. The resource planning process seeks to establish attainable and realistic budget and cost goals; to gain management agreement on mission area requirements, objectives, and priorities for the near- and far-term; and to establish criteria for measuring progress toward solving problems in existing plans and programs.

The RD&A assessment, objectives, and status of our strategic, nuclear, chemical, and tactical warfare mission areas and C³I are discussed in detail in the appropriate sections in Part III. Therefore, I will describe here only the major thrusts within these mission areas and discuss our assessment and status of programs in the cross-cutting mission areas of science and technology, space and geophysical, test and evaluation, acquisition management, international cooperation, and nuclear weapons development.

2. Major RD&A Thrusts

The FY 1983 RD&A budget and programs seek to establish a balance between necessary improvements in near-term capabilities and investments in long-term mission capabilities. The budget was painfully scrubbed to address the defense priorities established by the Reagan Administration. Chart III.J.4 illustrates the modernization and investment component of the overall TOA, allocated among mission capabilities. This allocation of our FY 1983 Budget request of \$114 billion for research, development, and acquisition provides about 44 percent of the budget to modernize and strengthen our deployed forces. The highlights of our major mission areas are briefly outlined below.

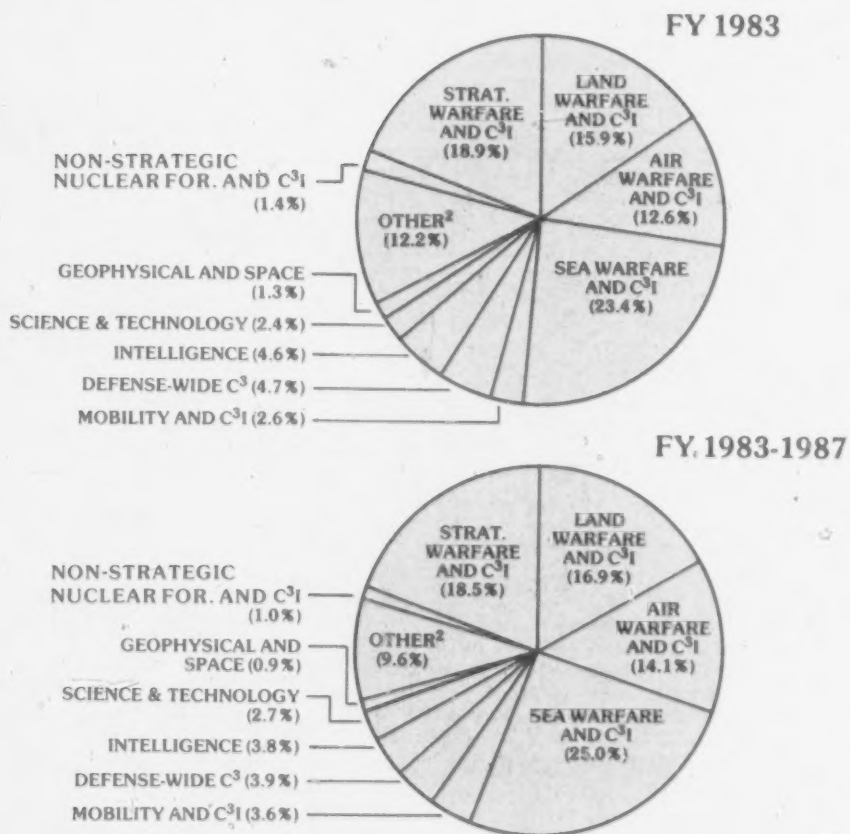
a. Strategic Forces

Survivability of our Intercontinental Ballistic Missile (ICBM) force and the readiness and responsiveness of the sea- and air-based legs of the TRIAD are critical to the maintenance of an adequate deterrent posture in the near-term. The objective is to survive and, subsequently, to be effectively employed through all phases of a conflict.

b. Non-Strategic Nuclear Forces

Our primary emphasis is on implementing NATO's long-range nuclear force program of deploying the ground-launched cruise missile (GLCM) and PERSHING II. Our objectives include survivability, operational effectiveness, and responsiveness to other U.S. systems, such as the Corps Support Weapon System (CSWS) now in concept development, to insure stability in light of the rapidly developing Soviet nuclear modernization.

CHART III.J.4

DOD INVESTMENT¹ BY MISSION-AREA

¹INVESTMENT REPRESENTS THE SUM OF RDT&E, PROCUREMENT AND MILITARY CONSTRUCTION APPROPRIATION CATEGORIES.

²OTHER REPRESENTS THE SUM TOTAL OF THE FOLLOWING MISSION-AREAS: TEST AND EVALUATION; INTERNATIONAL COOPERATION; MANAGEMENT AND SUPPORT; CHEMICAL AND MISCELLANEOUS

c. Chemical Warfare Forces

The Soviets are clearly ready and able to employ chemical weapons. Deficiencies in our current offensive and defensive capabilities could encourage use of chemical weapons against us. Our objectives are to produce modern and safer chemical munitions suitable to deter first use by any nation and to improve the readiness and effectiveness of our defensive equipment.

d. Tactical Programs

RD&A priorities are focused on two primary goals: (1) to deploy adequate numbers of a mix of weapons capable of sustained operations in a highly mobile combat environment where controlled, long-range, and precise firepower must be projected and (2) to deploy forces rapidly in response to hostile military actions which jeopardize our interests, requiring emphasis on mobility forces and tactical C³, consistent with the overall mission.

e. C³I Programs

We have assigned equal priority, and in some cases even greater priority to development of C³I system needs as we have to weapon systems modernization. There are major areas in which we must focus our efforts: responsiveness, mobility, and sustainability of our forces require more flexible, reliable, and endurable C³; integration of the operations of our available forces requires standardization, interoperability, and connectivity of our C³ assets; and improvements in Soviet electronic warfare capabilities require C³I capabilities to be more resistant to Soviet exploitation, jamming, and electronic combat.

f. Science and Technology Programs

To achieve our objective of speeding the transition of technology to deployed systems, we are seeking to improve our methods of relating the high payoff areas in basic and applied research to mission areas and to apply the resources needed to move them through the development process. Long-range resource planning is underway to improve coordination and ensure adequate investment in cross-service technologies. This prior proper planning will reduce redundancy and enable us to exploit promising developments that are underway.

3. Cross Cutting Missions

a. The Science and Technology (S&T) Program

(1) Assessment and Objectives

Although the Soviet Union has achieved significant progress in technologies of military importance, the United States continues to maintain a lead over the Soviets in most areas of critical military technology. There is a disturbing trend in that the USSR may be either

equal to or surpassing the United States in deploying military systems of a higher technological capability. We are fully committed to fielding technologically superior weapons in all areas. It is critically important that, as a nation, we conduct an aggressive S&T program to maintain or increase our technological lead over the Soviets.

Within the DoD S&T program, projects are undertaken that range from basic scientific investigations directed toward discovery of new phenomenology to large-scale demonstrations of promising technologies applicable as building blocks for new systems. R&D is performed by a combination of industry, universities, government agencies, and Government laboratories. It is through this combined and diverse effort that we protect our future technological lead.

(2) Program Status

During the late 1960s and early 1970s, research and exploratory development in the S&T program was reduced by about 50 percent. This adverse cut in the technology base was reversed in the late 70s and modest growth has since been achieved. I consider it prudent that we continue to support growth in our technology base to provide the nation a viable set of options for future weapons and support systems. My request for the technology base in FY 1983 is as follows:

TABLE III.J.1

Technology Base (Dollars in Millions)

	<u>FY 1982</u>	<u>FY 1983</u>
Army	587	700
Navy	770	853
Air Force	621	707
Defense Agencies	<u>930</u>	<u>1,077</u>
Total	2,908	3,337

In order to provide for the stronger management of the S&T program, I have proposed a new position, the Assistant Secretary of Defense for Research and Technology, which will be one of two top positions reporting directly to the Under Secretary of Defense for Research and Engineering. The proposed new Assistant Secretary will also serve as the Director of the Defense Advanced Research Projects Agency. This organizational arrangement will provide a much improved means of coordinating the Services' and Defense Agencies' programs to ensure the transfer of newly evolved technologies into operational realities.

During the past summer, the Defense Science Board (DSB) reviewed the technology base. Specifically, it identified technologies that offer a potential for major improvement in critical military capability, reviewed the current level of technology base, and considered our investment strategy. In addition, the board examined the transition process, university-DoD relationships, and the adequacy of scientific and engineering resources. This independent review has provided us with a valuable set of evaluations and suggestions upon which to improve our technological posture.

The Defense Department will be continuing to emphasize programs in directed energy, adverse weather precision guided munitions, advanced materials, chemical warfare, and very high speed integrated circuits. In addition, we will be undertaking extensive reviews of the S&T programs to select, for special management emphasis, those disciplines which offer an opportunity for order of magnitude improvements. Among the technologies that promise greatly improved capabilities for the forces are fail safe/fault tolerant electronics, hardening of electronics against various types of radiation, advanced software/algorithms, machine intelligence, rapid solidification materials, advanced composites, active and passive stealth for land, sea, and air forces and submarines, space-based radar, infrared arrays, high power microwaves, and short wavelength lasers.

Another priority is effective transition of newly evolved technologies into operational capabilities. Technology transfer hinges on a number of factors, perhaps most importantly, user-technologist interaction in the formulation of technology programs, clear evidence that the technology is mature, and the ultimate acceptance of the new technology by the user. The Under Secretary of Defense for Research and Engineering will be paying increased attention to the subject of effective transition particularly as it applies to Advanced Technology Development programs.

(3) Defense Advanced Research Projects Agency (DARPA)

The Defense Advanced Research Projects Agency, to which some 15 to 20 percent of the S&T program resources have been apportioned, has the mission to pursue high technology research and development for potential Service application to future defense missions and to provide technical management and guidance to multi-service programs of national significance. As high payoff technology areas mature, feasibility demonstrations are conducted in cooperation with the Services who are then in a position to rapidly move the technology through the development process.

Principal research thrusts in FY 1983 involve: "new material developments utilizing techniques such as rapid solidification processing; computer and communication sciences to develop new information processing

technology that will form the basis for future intelligence, network-based, military systems; unconventional detection and target penetration research; and geophysical research to develop new technological options for monitoring nuclear explosion events. Major thrusts in exploratory development during FY 1983 involve: space-based infrared (IR) surveillance, laser communications, high energy laser technologies, target acquisition and engagement technologies, particle beam technology, integrated command, control and communications, material processing technologies, and advanced composite aerodynamic structures.

The following summarizes DARPA's major R&D objectives:

-- Advanced Cruise Missile Technologies: engine improvements for greater range and payload, enhanced homing and guidance technologies to improve accuracy, and an improved understanding of detection and tracking phenomena to maintain the ability of cruise missiles to penetrate sophisticated air defenses.

-- Air Vehicles and Weapons: innovative concepts such as the X-Wing and the Forward Swept Wing technologies, and exploration of new composite materials, which could offer dramatic improvements in aircraft performance.

-- Command, Control, and Communications: technologies for survivable computer communications, secure message and information systems, improved crisis management and command systems, and submarine laser communications.

-- Land Combat: target acquisition and weapon delivery technologies that provide options to offset the Soviet armored vehicle assault capability, including advanced seeker technology, all-weather targeting and guidance, and advanced armor anti-armor technology.

-- Naval Warfare: development of integrated submarine sonar technology and exploration of non-acoustic submarine signatures.

-- Nuclear Test Verification: development of detection and identification techniques for monitoring other nations' compliance with agreements limiting nuclear testing.

-- Science Initiatives: development of intelligence automated systems and initiatives in electromagnetic propulsion, rapid solidification technologies, electronic and optics materials research, and particle beam technology.

-- Space Defense: The space-based laser technology program constitutes the major element in this area.

-- Space Surveillance sensor technologies for target detection with countermeasure protection, improved missile surveillance, and new options for early warning on both strategic and non-strategic levels.

(4) Defense Nuclear Agency (DNA)

The Defense Nuclear Agency conducts a comprehensive research program to assess the survivability of our military systems in a nuclear environment, to predict the lethality standards for confident destruction of enemy assets, and to develop technological capability that will enhance strategic and theater nuclear force survivability and security effectiveness. The DNA development and test programs span the entire range of DoD nuclear effects interest.

Increasing weapon sophistication in the United States and Soviet Union creates an urgent need for additional knowledge in nuclear effects. This driving force places increased emphasis on testing and evaluating nuclear weapons effects on strategic and tactical nuclear forces and their ability to survive an enemy attack. A primary goal will be to upgrade our knowledge of nuclear weapons effects phenomenology. Efforts will be directed toward programs which contribute to the effectiveness of land-based intercontinental ballistic missiles and associated systems; the TRIDENT II submarine launched ballistic missile; the air-launched cruise missile; advanced strategic aircraft; satellites; surface ships and submarines; command, control, and communications; and our individual fighting men.

The increasing emphasis on flexible response has made it necessary to increase the research on nuclear weapon employment, planning capabilities, and basic nuclear weapon effects.

A major part of DNA's activities is in the underground nuclear test program. In order to satisfy Service needs and to restore our testing capability, DNA is implementing an augmented test program. This is coordinated with the DoE test program.

b. RD&A in Support of Space and Geophysical Programs

(1) Assessment and Objectives--
Space

This mission area covers the planning, engineering, and acquisition activity related to launch of DoD space systems with current boosters; transition planning for Shuttle use; engineering support for experiments in space; advanced development of spacecraft subsystems; and a global instrumentation, communications, and data processing network supporting DoD spacecraft operations. Our primary objectives are to develop a flexible, effective space launch and command and control capability that can support successful space system deployment and operations with enhanced

survivability at reduced cost and to provide an advanced technology base for future space system opportunities. Major deficiencies are associated with the vulnerabilities of space launch and command and control systems and the requirement to provide capabilities responsive to projected user needs.

(2) Program Status--Space

The NASA developed manned Shuttle will provide increased capabilities in terms of payload weight and volume delivered into orbit, on-orbit payload checkout and servicing, and retrieval from low earth orbits. However, current boosters and production capability will be retained as a backup until Shuttle capabilities are demonstrated operationally. Our current plan is to fly a DoD experiment on the fourth Shuttle test flight, begin transition of operational spacecraft in October 1983, and complete transition by 1987. A joint Air Force/NASA review confirmed that the Inertial Upper Stage (IUS) is meeting its performance specifications with a 1982 IOC albeit with large development and production cost increases. Progress on construction of Shuttle facilities at Vandenberg AFB continues, but due to increasing schedule risk and technical considerations, the initial IOC date has been delayed until October 1985. Data security is being implemented as we modify NASA facilities to permit classified DoD operations. Studies will be initiated to define an appropriate approach to assuming the availability of space functional capability after a nuclear exchange.

Satellite Control Facility (SCF) data systems are being modernized and a new Consolidated Space Operations Center (CSOC) is planned to eliminate the single nodes that exist at the SCR and NASA facilities supporting DoD spacecraft and Shuttle operations. In FY 1983, facilities construction and systems acquisition will begin leading to a late 1986 IOC for CSOC. We plan to acquire the CSOC control capability by a phased approach whereby capabilities will be added incrementally as needed to support operational requirements.

(3) Assessment and Objectives-- Geophysics

This activity includes the development, engineering, and acquisition of geophysical/environmental support systems and the production and dissemination of geophysical/environmental data. As our weapons and tactics become more sophisticated, accurate and reliable, environmental support plays an increasingly more important role in force employment. Our technology base programs address the fundamental interactions of the air, ocean, space, and terrestrial environments with present and future weapon systems, while our environmental observation and tactical decision aid development programs stress delivery of weather information to operational decision-makers to maximize effectiveness of employed forces.

(4) Program Status--Geophysics

This year's environmental sciences programs for battle area support are structured to speed the transfer of technology base developments into the operational force structure. Basic research in atmospheric and oceanographic properties which govern visible, infrared, and millimeter wave transmission feeds into the joint-Service DoD Atmospheric Transmission Program. The related development program is now providing the key tactical decision aid software needed for precision guided munitions support. Engineering development of tactical observation, processing, and display systems for shipboard and field deployment continues.

Modernization of our 1950's technology weather equipment continues with the development of the Next Generation Weather Radar (NEXRAD) and the Automated Weather Distribution System programs. Joint programs and our major participation in the Office of Federal Coordinator for Meteorology ensure that DoD weather support programs are fully coordinated with and complementary to the programs of the other Federal agencies. One of the most critical wartime readiness elements of our environmental support structure is the Defense Meteorological Satellite Program (DMSP) which may be the only consistent source of weather and ocean data for our operational military commands in wartime. Vital denied area weather and ocean data needed by our combat commanders are transmitted directly from the spacecraft to our Naval vessels at sea and to deployed tactical vans for direct Air Force, Army, and Marine Corps battlefield support. Acquisition of the new C-130 transportable tactical readout vans, and development of the microwave imaging sensor and other increased remote ocean sensing capabilities, are important enhancements of this proven capability. Program deficiencies resulting from launch and spacecraft failures in 1980 highlighted the continued need for ground-spares spacecraft to insure continuation of essential operational support.

c. Test and Evaluation(1) Assessment and Objectives

Operational effectiveness and suitability of weapon systems in acquisition continue to demand our critical attention and scrutiny in the coming year. The changing acquisition process and delegation of authority to the Services does not obviate our requirement to ensure that system readiness objectives are well defined and that operationally oriented test criteria that can be measured and assessed in time to support major program decisions are established. To meet this requirement, we will closely monitor the establishment and measurement of reliability, availability, and maintainability criteria throughout the acquisition process. Well prepared and maintained Test and Evaluation Master Plans will be the primary instrument utilized for planning, measurement, and assessment.

During FY 1983, we will encourage greater interaction and cooperation among Test and Evaluation Offices, Service Test and Evaluation Offices, the developing agencies, and private industry. During early system development stages, emphasis will be placed on resolving issues and determining realistic performance goals and thresholds. Additionally, this interaction and cooperation will be the basis for developing timely, thorough, and cost-effective test programs and adequate test hardware to accomplish test objectives.

(2) Program Status

(a) Test Technology

In support of testing technology advancement, considerable attention is being given to the effective utilization of system test beds and simulation techniques and to software performance evaluation. These advances are required if the activities are to provide realistic assessment of system operational capability.

(b) Test Facilities and Resources

FY 1983 efforts are associated with the continuing assessment and modernization of range instrumentation required to support the testing of advanced technology systems including high energy laser systems at the tri-Service test facility located at White Sands Missile Range. Improved data collection systems are being installed at several installations to reduce data turnaround time and labor intensiveness. Accuracy enhancement for range radar measurements and the application of NAVSTAR/GPS inputs to range instrumentation will be pursued. A long-term program of facility modernization will continue.

(c) Joint Operational Test and Evaluation (JOT&E)

The FY 1983 JOT&E program contains 6 tests to evaluate systems, tactics, concepts, and interoperability in multi-Service operational scenarios. Several of these tests are designed to investigate the effectiveness of the Services' air defense systems operating in an integrated command and control environment. The FY 1983 effort also contains feasibility evaluations on a number of potential JOT&Es which will be considered for future tests.

(d) Foreign Weapons Evaluation (FWE) Program

This program supports technical and/or operational evaluation of foreign nations' weapon systems, equipment, and technologies with a view toward avoiding unnecessary duplication in development, enhancing interoperability, and promoting international technology exchange. The FY 1983 program will emphasize the expanded evaluation of foreign combat support equipment in addition to weapons.

d. Acquisition Management

(1) Assessment

The instability which has characterized the weapons system acquisition process in recent years has resulted in rising costs and delayed availability for many of our most important weapons. Many well-intentioned attempts in the past have, unfortunately, had little lasting impact in reversing these trends. From the outset, we realized that in order to meet the current and projected Soviet threat, there could be no delay in seeking effective ways to correct inefficiencies in the acquisition process. We are dedicated to making the changes necessary to produce more weapons at lower cost on a more timely basis.

To this end, on March 2, 1981, we directed a 30-day assessment of the Defense Acquisition System by a joint team drawn from OSD, the Joint Chiefs of Staff, the Services, and private industry. The assessment, the DoD Acquisition Improvement Program, confirmed many of the problems which have been identified in the past, i.e., affordability, instability, unreliable cost estimates, and burdensome requirements and provided recommendations which served as the basis for our plan to solve these problems.

On April 30, 1981, the Deputy Secretary and I endorsed 8 major acquisition management principles and directed 32 separate actions which comprise our Acquisition Improvement Program. The management principles include improving long-range planning, delegating more responsibility and authority while strengthening accountability, using lower risk approaches, using more economical production rates, making costing and budgeting more realistic, considering readiness and sustainability from the start of programs, strengthening the industrial base, and stressing maximum use of competition.

The specific actions which we have directed reflect these management principles and when fully implemented, will provide substantial savings in acquisition time and cost. In general, these actions will reduce acquisition costs by increasing program stability, implementing multi-year procurement, simplifying procedures, regulations, and legislative requirements, encouraging capital investment to increase productivity, promoting economical production rates, and budgeting to most likely costs. They will shorten acquisition time through the use of an evolutionary approach towards procurement, the Pre-Planned Product Improvement Program (PPI), and by adequately funding test equipment during the early phase of programs. In addition, support and readiness for major programs will be improved by providing incentives for reliability and maintainability and establishing readiness objectives early in the process. Overall efficiency of the process will be improved through streamlining the DSARC process, implementing controlled decentralization, reducing

data and briefing requirements, and tying the acquisition process more closely to the planning, programming, and budgeting process.

Implementation of acquisition improvement actions is also an important objective of the newly-established DoD Council on Integrity and Management Improvement chaired by the Deputy Secretary of Defense. A series of performance reviews has also been initiated in which direct consultation with the Service Secretaries is possible on problems concerning implementation. Through these review mechanisms, we are ensuring substantial progress in the implementation of the Acquisition Improvement Program.

(2) Status of the Acquisition Improvement Program

It is essential that we improve our ability to budget to most probable cost and to bring cost growth in all of its dimensions under control. We must provide stability to our major programs through more effective long-range planning and better estimating.

A number of important initiatives are underway to increase program stability. The Services have submitted preliminary lists of programs as candidates for a consolidated list of about 30 major programs to which the Services and OSD will make a management commitment for stable funding. Program terminations totalling \$1.8 billion in FY 1983 and \$7.5 billion for the FYDP identified during this year's budget review indicates our resolve to provide offsets in order to fully fund high priority programs. In addition, new programs are under careful review to ensure that only the most urgent requirements are pursued.

Stability and cost savings through improved economies of scale, advance lot buying, and efficiencies in production processes can also be achieved through multi-year funding. Congress has approved an amendment to the FY 1982 DoD Authorization Bill which extends the use of multi-year contracting to major programs. We have proposed the use of multi-year on three programs in FY 1982--the F-16, the C-2, and the Troposcatter Radio. Savings of almost \$300 million over the life of these contracts are anticipated as a result of using the multi-year approach. Additional programs will be proposed in FY 1983.

Efforts are also underway to reduce administrative and other indirect costs through reductions in required documentation and reviews. The Defense Systems Acquisition Review Council (DSARC) process, for example, has been streamlined by reducing the number of required program milestone reviews from four to two. Documentation for the DSARC has also been significantly reduced.

In addition, lower administrative costs are being attained by redirecting management attention to reflect the changes in our economy. Many management thresholds in use predate the recent years of high inflation. Consequently, we have managed programs whose real

value may be half of what it was 10 years ago. By increasing the thresholds which define a major system from \$100 to \$200 million in R&D and \$500 million to \$1 billion in procurement, we have recognized changes in our economy. As a result of this initiative, 10 major programs which require DSARC review under the old thresholds have reverted to the Services for management review. The higher thresholds for small purchase procedures included in the 1982 Authorization Act will also reduce administrative costs.

The use of standard equipment across programs and Services can also lower the cost of administration and support while benefiting readiness and sustainability. The Military Departments are resolving issues of standardization and are identifying new development programs for subsystem and support equipment which can satisfy common requirements. In the future, acquisition of peculiar, rather than common, equipment will require full justification for Defense Department review. In addition, greater effort will be placed on avoiding development costs by increased utilization of commercial market place supplies and equipments through accelerated use of industry standards and development of simplified specifications and commercial item descriptions for defense procurement of competitive off-the-shelf items.

Substantial potential for cost savings also exists through increases in productivity. The President's Economic Recovery Tax Act of 1981, which permits a more rapid capital equipment depreciation allowance, is a critical element in revitalizing the productivity of American industry. Initiatives are underway within the Defense Department to cultivate the investment environment in other important ways. Progress payment rates for defense contractors have been increased 10 percentage points in order to improve cash flow for business and promote capital investment. Additional DoD funding is being made available to Manufacturing Technology and Technology Modernization programs during the next five years to promote further advances in productivity.

Budgeting to most likely costs presents difficult problems including a variety of technological and economic uncertainties, however, we are determined to minimize the extent and impact of cost estimating errors. The Services have been directed to budget to the most likely cost of a program, including predictable cost increases due to risk. To assist in determining real costs, the Cost Analysis Improvement Group provides independent cost estimates in support of acquisition decisions for major programs.

Acquisition time and costs can be reduced by adopting a less risky, more evolutionary approach in applying technological advances in weaponry. The Pre-Planned Product Improvement Program (P³I) is designed to operationalize this conceptual approach while simultaneously allowing us to develop higher performance alternatives. In response to our request, the Services have identified some 40 programs as suitable candidates for the P³I programs.

It has been Department policy to encourage competition in the acquisition process wherever possible. Competition has demonstrated its potential to lower costs while promoting a more robust industrial base. However, we also recognize that competition may result in buy-ins which can exacerbate the growth problem. Our basic objective is to encourage meaningful competition at realistic prices for programs where competition is feasible. The majority of our funds continues to be awarded either as a direct result of competition or in follow-on awards where the source was competitively selected, but there is room for improvement. New policy guidance has been issued to all principal DoD buying activities to encourage maximum use of competition. The Services are preparing management objectives on the use of competition to enable us to measure our progress.

e. International Programs

(1) Policy Objectives

Our objectives in the international arena are to improve U.S. coalition war-fighting ability and strengthen the forces of our allies and other friendly nations through cooperative defense agreements, security assistance, and foreign military sales that promote common security interests and to control technology transfer in a manner that advances U.S. security and thwarts Soviet progress.

(2) Current Programs and Initiatives

We strongly advocate cooperative defense programs with friends and allies when those programs make sense, meet valid military requirements, and are reasonably cost-effective. We continue to support the opening of defense markets by promoting agreements which remove restrictive and artificial barriers to international competition for defense systems. It is our view that industry should take a more direct role in international cooperation, and we have taken a number of steps to facilitate this. We created a task group to review comprehensively DoD policy on international co-production, industrial participation, and offset agreements. This group consulted with industry and has made recommendations to ensure that our international programs are based on consistent, equitable policies that reflect the national interest. The U.S. Trade Representative and I have created an industrial advisory committee on defense trade policy and industrial base issues which will consult with and make recommendations to the USD(R&E) and the Deputy U.S. Trade Representative. These efforts will increase the involvement of the private sector in, and give greater coherence to, our international arms cooperation policies.

In the area of technology transfer, we have completed revision of the Militarily Critical Technologies List (MCTL) and are taking steps to implement the use of this list as a control for technology transfer on a multi-lateral basis in the Coordinating Committee for

Multilateral Export Controls (COCOM). We are working with the Department of Commerce in rewriting the DOC technical data regulations, and we are preparing for interagency coordination a revised version of the Interim DoD Policy Statement on Export Control of United States Technology to establish a national policy for export control of U.S. technology.

(3) International Defense Cooperation Plan

Future plans entail closer cooperation in NATO within the framework of the newly adopted Periodic Armaments Planning System (PAPS). PAPS will channel cooperative technological and material development to meet specific mission needs of the Alliance, thereby reducing duplication and increasing combat effectiveness. Outside the NATO area, we will continue to assist friendly nations in improving their industrial bases and in strengthening their defense forces.

f. Nuclear Weapons Development

(1) Assessment and Objectives

The DoD and the DoE share statutory responsibilities for managing the U.S. nuclear weapons program. Both are engaged in a major modernization program to support improvements in the retaliatory posture of our strategic nuclear forces and the replacement of many of our aged theater systems with modern nuclear warheads thereby improving military effectiveness, safety, security, survivability, and endurance in all environments.

(2) Coordination with DoE Programs and Plans

The Atomic Energy Act of 1954, as amended, continues that provision of the original 1946 Atomic Energy Act which provided for a Military Liaison Committee through which the DoE shall advise and consult "on all atomic energy matters which the DoD deems to relate to military applications of atomic weapons on atomic energy, including the development, manufacture, use, and storage of atomic weapons, the allocation of special nuclear material for military research, and the control of information relating to the manufacture and utilization of atomic weapons." The President annually authorizes, by issuing a Nuclear Weapons Stockpile Memorandum (NWSM), the number and types of nuclear weapons to be produced by DoE and transferred to DoD. He also annually authorizes a deployment plan for nuclear weapons, semi-annually authorizes the nuclear testing program, and, on occasion, provides specific programmatic direction to DoD and DoE.

(3) Status of Major Programs

The DoE has been producing a number of different nuclear warheads for DoD systems, including the B61-3 and B61-4 tactical bombs; the W-70, an enhanced

radiation/reduced blast (ER/RB) warhead for the already deployed Lance missile; the W-76 warhead for the TRIDENT SLBM; the W-78 warhead for the MINUTEMAN III ICBM; the W-79, an 8-inch artillery fired atomic projectile with ER/RB capability; and the W-80 warhead for the ALCM.

Other warheads now in development include the SLCM warhead; the W-81 warhead for the Navy Standard Missile (SM-2); the W-82, 155mm artillery projectile; and the to-be-selected warhead for the MX ICBM.

4. Conclusion

We are making steady progress in most areas. The real payoff--adequate quantities of effective systems in the field--remains ahead. Achievement of our goals depends on Congressional approval of our programs, and I intend to work closely with cognizant Congressional committees and their staffs to ensure that our RD&A programs are adequately explained and justified. We will continue our emphasis on programs to deploy increased quantities of systems as rapidly as possible and to increase our ability to phase our technology into deployed systems more rapidly.

K. THE DETERRENCE OF CHEMICAL WARFARE

1. Introduction

The United States and all NATO countries are formally committed to a policy of "no first use" of lethal chemical agents and are faithful adherents to the Geneva Protocol of 1925. The United States and its allies have accordingly been seeking a complete and verifiable ban on lethal chemical weapons.

At present, the United States and its allies lack an effective chemical warfare (CW) capability, while the Soviet Union, on the other hand, deploys large and well-equipped chemical warfare forces dedicated to that purpose, and all units train extensively for chemical warfare including the use of live agents.

This sharp imbalance has adverse consequences for U.S. and NATO defense capabilities on the tactical level and equally for the prospect of obtaining a comprehensive, effective, and verifiable arms control agreement that would ban the stockpiling and use of chemical weapons.

It is important to recognize the full gravity of the CW threat in combat conditions: Soviet chemical attacks would seriously degrade tactical operations.

Between 1977 and 1980, the United States engaged in bilateral negotiations with the Soviet Union toward achieving a comprehensive, effective, and verifiable agreement on chemical weapons. While the United States continues to support the objective of concluding a ban on chemical weapons development, production, and stockpiling, we cannot be optimistic on the prospects of success. Aside from the difficulties of verification, the present drastic asymmetry between U.S. and Soviet CW capabilities deprives the Soviet Union of an incentive to negotiate seriously.

The Soviet Union is much better prepared than the United States or our allies to wage chemical warfare and fight in a chemically contaminated environment. They possess a considerable variety of lethal and incapacitating chemical agents and the means to deliver them. Their military doctrine includes the use of chemical weapons and acknowledges their value, particularly when used in massive quantities and with surprise. They have a busy and expanding chemical proving ground and have invested heavily in individual and collective protection and decontamination equipment and have distributed these widely to their forces. By contrast during the 1970s, the United States did not maintain its retaliatory stockpile, did little to improve its defense against chemicals and neglected relevant training and doctrine. We must develop a credible and effective deterrent so that the United States can gain negotiating leverage in this area just as we plan to in any other area.

The inadequacy of the CW capabilities of the United States would require new energetic action even if the

Soviet Union's conduct in this area had been marked by restraint in force deployments and a total abstention from the direct or proxy use of CW weapons. Yet, unfortunately, that is not the case.

2. Program Objective

The objective of the chemical warfare program is to deter enemy first use of chemical weapons against U.S. and allied forces and to terminate such use at the lowest possible level should deterrence fail. This requires developing the capability to sustain military operations in a contaminated environment and to retaliate in kind against enemy first use of chemicals. The chemical warfare program includes developing and fielding protection and detection equipment; establishing and refining doctrine; training our forces to withstand and recover from the effects of a chemical attack; and retaliate with chemicals, if directed, after an enemy first use of CW. Retaliations for the use of biological warfare attacks would have to be accomplished with other systems since the United States has renounced any offensive use of biological or toxin weapons. Although the principal thrust of these programs is to meet the threat posed by the Soviet Union; equipment is being developed to respond to a worldwide spectrum of contingencies.

3. Program Status and Requirements

a. CW Protective and Defensive Capability

Research, development, and procurement efforts are being substantially increased and directed toward equipment which will provide better protection with less force degradation. New designs and materials are necessary to overcome the physiological heat stress and psychological burden of the present individual mask and overgarment as well as the loss of dexterity and tactility due to bulky gloves and boots. Further, improved medical defense items, alarms and detection systems, decontamination equipment, and collective protection to provide adequate rest and relief capabilities are necessary.

b. CW Retaliatory Capability

The current U.S. chemical retaliatory capability is inadequate both in weapon and agent composition. No chemical agents or munitions have been produced since 1969 and the inadequacy of this stockpile will be compounded by continued deterioration and obsolescence as new delivery systems are brought into the inventory and old delivery systems are retired.

c. Support Area

More intelligence support is needed to improve the current threat definition, and communications facilities, equipment, and personnel must be protected.

Host nation support of logistics activities, supply and maintenance, and resupply in a contaminated environment must be addressed. Collective protection capability for fixed installations is needed for sustained operations. Doctrine must be developed and integrated into the total force structure and exercises must be conducted frequently to test our doctrine, train our forces, and identify deficiencies.

We must develop innovative techniques to demilitarize leaking and obsolete munitions because current methods are too slow and costly. Unitary stockpile items must undergo extensive periodic maintenance to maximize their deterrent value. Force structure changes must be made to improve our responsiveness and our training programs. Realistic training programs (some using chemical agents) are required to provide practical experience for our special chemical forces in planning and preparation for actual CW operations. We are committed to accomplish these tasks.

4. Program Description

a. Defensive Program

Current capabilities are severely limited because of available quantities of equipment, degraded performance of that equipment, and minimal personnel training. To meet these deficiencies, we have implemented a major procurement and R&D effort directed at rapidly improving our protective capabilities.

We have created an OSD steering committee and have formed an office under the Assistant to the Secretary of Defense (Atomic Energy) to manage and coordinate all CW matters.

We have initiated and accelerated technology base programs in each critical area and are expanding the procurement program to rapidly field new and improved defensive equipment. We are currently delivering to the field protective masks, overgarments which absorb chemical agents, boots and gloves, automatic alarms to alert troops to the presence of chemical agents, decontamination units to allow continued operations, individual decontamination and detection kits, medical antidotes, field shelters, collective protection facilities, and individual filter units for armored vehicles.

We have initiated programs to better train our forces in the use of available equipment. Well trained personnel will be better able to perform assigned missions, thereby reducing degradation imposed by the cumbersome personal protective equipment.

Medical defense programs are a principal thrust area designed to provide improved prophylaxis and therapy as well as an integrated doctrine for medical operations. Research, Development, Test and Evaluation (RDT&E) funding for these defensive programs has increased

from \$81 million in FY 1981, to \$173 million in FY 1982. We are proposing \$213 million for this area for FY 1983. In FY 1981, procurement of defensive equipment was \$72 million; in FY 1982, \$174 million, and we plan \$119 million for FY 1983.

The defensive posture of our NATO allies is highly variable. Under the NATO Long-Term Defense Program (see Part III.I.), a plan has been developed to provide levels and types of equipment as guidelines for all NATO countries.

b. Retaliatory Program

A necessary part of our deterrent posture is the maintenance of an adequately sized and structured retaliatory stockpile. Improved protective measures alone are inadequate as a deterrent against the use of CW agents. Indeed, it has been suggested that the possibility of nuclear retaliation to the use of CW will provide an adequate deterrent. We do not consider such a posture credible today. The United States must have a credible chemical response option to Soviet use of chemical weapons. We need a program that provides measurable and visible evidence of our CW retaliatory capability.

Our present retaliatory stockpile is being maintained through a modest maintenance and surveillance program. We have recently completed the relocation of our most modern air delivered bombs, Weteyes, from Rocky Mountain Arsenal to Tooele Army Depot for long-term storage. Research and development and plans are underway to modernize the stockpile with binary weapons systems. Binary munitions consist of two nonlethal components packaged separately which combine to form a toxic agent, only while in-flight to the target. They will provide significant advantages in the total life-cycle of manufacturing, storage, transportation, and eventual disposal operations. A modernization program would correct the present stockpile deficiencies of agent and munition compatibility with modern delivery systems. Additionally, binary munitions would resolve many of the environmental and public health concerns since the binary components are mixed only in flight to form nerve agent. Only the nonlethal precursors, in separate canisters, are stockpiled. We have programmed \$7.0 million in FY 1981, proposed \$29 million for 1982, and \$32 million for 1983, to expedite this research and development.

In FY 1981, Congress appropriated \$3.15 million in military construction funds to renovate an existing structure at Pine Bluff Arsenal to begin binary production. This year, \$20 million to procure the necessary processing equipment was approved as an item in the FY 1981 supplemental budget request. This program has complete Administration support. Currently, plans exist to produce two chemical binary weapons, the 155mm GB projectile and the Bigeye VX bomb. Consideration of other systems, to include more effective agents and longer range delivery systems, are currently under review.

c. Force Modernization

We recently reestablished the U.S. Army Chemical School at Ft. McClellan, Alabama, which can provide training for all Services. This will assist in restructuring our forces to meet the chemical requirement. The Army is continuing to activate a nuclear, biological, chemical (NBC) Company in each division, separate brigade, and corps, in addition to placing a NBC qualified noncommissioned officer in every company and a lieutenant and noncommissioned officer in every combat arms battalion. A proper chemical force structure is now being planned to replace the quick fixes of the past few years. In the Army, the current structure of 7,400 personnel will grow to 11,200 by the end of FY 1987 with a required strength of over 21,000. Future changes include modifying the NBC Company to provide additional decontamination capability and an organic smoke platoon, forming decontamination companies, and moving the reconnaissance capability to the division cavalry squadron.

Similarly, the Marine Corps is creating NBC defense units at Marine Division, Marine Aircraft Wing, and Force Service Support Group levels. An NBC Defense warrant officer is being established through the force structure down to the regimental level to supply NBC expertise and training.

The Air Force will increase its force structure by placing 800 chemical defense specialists at bases in high threat areas in FY 1983 and FY 1984. A total of 707 additional life support technicians will be placed to maintain aircrew protective equipment. An additional 83 technicians will be placed in FY 1983-87 for disaster preparedness, civil engineering, and avionics maintenance functions.

At this time, no changes are foreseen within the Navy. The current structure can accommodate the need for decontamination and other requirements under the damage control function, although more work needs to be done to permit Naval forces, particularly those associated with the amphibious warfare mission, to operate and fight in a CW environment.

d. Demilitarization of Obsolete Stockpiles

One of our major problems is demilitarizing obsolete or leaking munitions in our current stockpile. Over 630,000 unserviceable, unrepairable munitions have been identified for immediate demilitarization. An R&D program (\$13 million) is planned for FY 1983 to continue development of safe, efficient, and cost-effective technology to replace the current energy-intensive and costly methods of disposal. At this time, two efforts are in progress: the Drill and Transfer System and the Chemical Agent Munitions Disposal System (CAMDS). The CAMDS is a prototype system designed to develop and demonstrate procedures and equipment for large-scale demilitarization of chemical agents and munitions.

Present estimates to demilitarize the stockpile range from \$2 to \$3 billion; new technology can reduce this expense.

5. Conclusion

Our CW programs are designed to provide a credible deterrent to the use of chemicals by a potential enemy. The purpose is to make it less likely that the Soviet Union would initiate first use of chemical weapons in violation of the long-standing international treaty. The programs described in this chapter, when fully implemented, will provide a capability for operating in the contaminated environment and for retaliatory action against the Soviet forces.

L. LOGISTICS

1. Overview of Defense Logistics

Defense logistics consists of a diverse collection of functions and activities that provide across-the-board support for our military forces. The major objectives of our logistics program are to:

- ensure that the materiel readiness and sustainability of our forces are consistent with national defense policy;
- ensure that our military population is adequately fed, clothed, and housed;
- provide essential upkeep of DoD's capital plant and facilities; and
- provide the necessary levels of "miscellaneous," but indispensable, management and support.

Although often considered unglamorous when compared to improving force structure or modernization, logistics is essential, and unfortunately, expensive. As an example, about \$10 billion is being requested just for spare parts and ammunition, both of which are vital to support readiness and sustainability. These funds represent an increase of \$4 billion or a 635 percent increase over FY 1981 and \$1 billion or an 11 percent increase over FY 1982. It is imperative that this favorable trend continue in order to enhance our readiness and sustainability posture.

2. Logistics Programs

a. Materiel Readiness

(1) General

Materiel readiness consists of the amount of materiel on-hand relative to the amount prescribed to perform the wartime mission and the ability of this materiel to perform the functions for which it was designed and procured.

Improving materiel readiness is a key theme in the Reagan Administration's Defense program. Immediately upon taking office, we began to correct materiel readiness deficiencies. In our "Revisions to the FY 1982 Materiel Readiness Report" submitted to the Congress in April 1981, we projected specific improvements in materiel readiness indicators we expected to result from the President's FY 1981 Budget Supplemental and FY 1982 Budget Amendment. Our FY 1983-87 Defense Guidance directed the Services to improve the readiness of programmed and previously approved forces before modernizing or increasing force structure. Our FY 1983 Budget will continue these readiness improvement initiatives.

This section provides an updated overview of the materiel readiness of our principal weapon system types. In February 1982, we will send the fifth annual Materiel Readiness Report (MRR) to the Congress which will detail projections of materiel readiness, based on the FY 1983 Budget, for all major DoD weapon systems and equipment. In conjunction with the MRR, we will also provide an overall readiness assessment based on the proposed FY 1983 Budget.

(2) Aircraft Materiel Readiness

There are no significant deficiencies in the quantity of airframes on-hand, the first basic component of aircraft materiel readiness. We use mission capable (MC) rates to indicate the second component of materiel readiness. As we reported to the Congress in April 1981 in "Revisions to the FY 1982 Materiel Readiness Report," the President's FY 1981 Budget Supplemental and FY 1982 Budget Amendment will improve aircraft MC rates in FY 1982-84. The FY 1983 Budget makes further improvements in this area.

The availability of serviceable spare components to replace those that fail during operations is a key element in aircraft materiel readiness. The following funding profile shows our increased emphasis in aircraft spares procurement:

(U)

TABLE III.L.1

	<u>Aircraft Spare Procurement (\$M)</u>		
	<u>FY 1981</u>	<u>FY 1982</u>	<u>FY 1983</u>
<u>Army Aircraft</u>			
Initial Spares	170	148	151
Replenishment Spares <u>a/</u>	61	76	331
<u>Navy/Marine Corps Aircraft</u>			
Initial Spares	465	753	932
Replenishment Spares <u>a/</u>	631	789	1,149
<u>Air Force Aircraft</u>			
Initial Spares	520	687	983
Replenishment Spares <u>a/</u>	2,190	3,211	2,673

a/ Peacetime operating stocks, and war reserves.

In FY 1983, the Navy will continue its initiative to correct long-standing deficiencies in aircraft carrier and Marine Air Group spare parts allowances to improve peacetime materiel readiness and training. They should complete this initiative by the end of the FY 1986 funded delivery period.

On the average, two years generally go by between appropriating funds for aircraft spares and the delivery of those spares. Thus, much of the benefit of the increased FY 1983 funding for aircraft spares will not be reflected in aircraft MC rates until FY 1985 and beyond.

Depot-level repair funding and backlogs of aircraft components, engines, and airframes can significantly influence aircraft readiness. The availability of components and engines generally exerts a stronger and more direct influence on materiel readiness, as reflected in MC rates, than does airframe rework. FY 1983 depot repair funding and backlogs for active forces are shown below, along with comparable figures for the previous two fiscal years.

(U)

TABLE III.L.2

	Aircraft Depot Level Funding/End-Year Backlogs (\$M)		
	FY 1981	FY 1982	FY 1983
<u>Army</u>			
Components	108/0	129/0	160/0
Engines	37/0	57/0	76/0
Airframes	80/3	90/0	95/0
<u>Navy/Marine Corps</u>			
Components	710/25	691/13	842/0
Engines	181/13	195/21	191/0
Airframes	318/1	356/32	347/0
<u>Air Force</u>			
Components	1,106/11	1,223/0	1,406/0
Engines	199/0	238/0	278/0
Airframes	547/0	697/0	747/0

The MC rate projections depend on manpower resources as well as funding levels. In particular, constraints on the depot civilian work force can affect our depot repair programs.

(3) Ship Materiel Readiness

The FY 1983 Budget fully funds organizational and intermediate level maintenance, including the Commercial Industrial Services program, used to accomplish "overflow" intermediate maintenance requirements. Also, the budget fully funds Reliability Centered Maintenance (RCM), extending the benefits of this program to all ship classes. The number of ships overdue for overhaul will be reduced from 16 in FY 1982 to 11 in FY 1983 with operational commitments causing all this backlog.

Funds requested for the Ship Support Improvement Project (SSIP) in FY 1983 will be applied to programs directly affecting fleet readiness, e.g., developing and implementing the life cycle support system for the progressive overhaul concept of the Lo-Mix ships, FFG-7, and PHM-1 classes; and developing, implementing, and continuing surface ship Engineered Operating Cycle (EOC) programs. Approximately 75 surface ships will have entered EOC programs by the beginning of FY 1983. During FY 1983 we will expand these programs to include the LHA-1 class and the first of the new ships in the AO-177 and the CG-47 classes. The Navy is completing engineering development for future EOCs for the LPH-2 and AOR-1 classes and undertaking program development for the CGN-36/38 class ships in FY 1983. Under the Intermediate Maintenance Activity Upgrade Program we will begin improving the Shore Intermediate Maintenance Activities at Pearl Harbor and complete the second stage of the improvement program at San Diego. We expect to complete construction at five other activities in FY 1983, followed by equipment installation. These improvements are essential to fulfill current and future maintenance requirements.

(4) Land Forces Materiel Readiness

The FY 1983 Budget begins an important procurement program to correct long-standing deficiencies in stocks of major equipment end-items in Army and Marine Corps units as illustrated in Tables III.L.3 and III.L.4.

(U)

TABLE III.L.3

Stocks of Selected Equipment End-Items (Army)

	Objective for FY 1987	June CY 1981	End FY 1983 FDP a/	End FY 1987 FDP
Medium Tanks	13,702	11,481	13,059	15,106
Armored Personnel (FVS)	12,401	4	1,625	4,922
Carriers (M113)	8,135	12,332	11,947	11,210
Self-Propelled Artillery	3,524	2,959	3,249	3,260
5-Ton Trucks	28,233	10,856	13,476	18,673

a/ Funded Delivery Period.

(U)

TABLE III.L.4

Stocks of Selected Equipment End-Items (USMC)

	Objective for FY 1987	June CY 1981	End FY 1983 FDP a/	End FY 1987 FDP
Medium Tanks	716	576	646	716
Landing Vehicles, Tracked	1,350	0	446	1,314
Light Armored Vehicles	200	0	118	268
Self-Propelled Artillery	256	218	230	230
5-Ton Trucks	8,169	3,818	5,745	6,960
5/4 Ton Trucks	13,993	0	656	12,692

a/ Funded Delivery Period.

b. Combat Sustainability

(1) General

Combat materiel sustainability--the "staying power" of our combat forces--depends on the continuing availability of weapons, equipment, secondary items, fuels, and munitions to replace those consumed or destroyed during combat operations. Sustainability is achieved primarily through a combination of war reserve inventories and post D-day production. We are expanding existing programs and beginning new ones as we move from the previous philosophy of a "short war" to the more realistic requirement to outlast any enemy in a protracted conflict.

(2) War Reserve Stocks

War reserve stocks are the additional inventories, above the levels needed to support peacetime operations, that we buy to support the higher anticipated wartime activity levels and loss rates.

(a) Weapons and Equipment

Both the Army and the Marine Corps possess and continue to procure combat attrition replacement assets for major items of ground force equipment such as tanks, armored personnel carriers, and artillery pieces.

(b) Munitions and Secondary Items

We are replacing our old war reserve munitions stocks with new, far more effective, and more costly, air and ground munitions, precision-guided munitions, air-launched missiles, and improved conventional ground munitions. Until we complete this transition, our stocks of the modern munitions will be below desired levels.

Secondary items include weapon system spare components, repair parts, personnel support items, and a myriad of low-cost consumable items. Although secondary items account for a smaller part of the dollar value of our total war reserve requirements, shortages of these items seriously degrade our combat capability and are as important as shortfalls in major items of equipment and munitions.

We have budgeted about \$90 billion over the FY 1983-87 period to improve our modern war reserve munitions and secondary items posture.

The sustainability of our fleet of C-5 aircraft is particularly critical to our ability to deploy any military force with outsized cargo e.g., tanks. The FY 1983 Budget will allow the C-5 fleet to meet its wartime sustainability requirements.

(c) Petroleum, Oil, and
Lubricants (POL)

We are placing renewed emphasis on over-coming shortfalls in our war reserves of bulk petroleum products. This program is expensive, considering the unprecedented escalation of fuel prices in recent years, but important. In the past year we have been able to take advantage of the relatively soft petroleum market to augment our stocks at favorable prices, but we do not expect this situation to last.

(3) Production Base

Increased production lead-times and costs have seriously degraded the ability of the industrial base to respond to our near-term readiness and long-term sustainability requirements. These problems have also caused a deterioration of the sub-contractor and supply base, diminished competition, and created production bottlenecks. In the FY 1983-87 Defense Guidance, we introduced the lead-time reduction concept for industrial base preparedness planning, programming, and budgeting. This new focus recognizes that acting to reduce production lead-times will enable us to build our war reserve inventories sooner and improve our ability to surge or mobilize the industrial base.

c. Facilities Support

Facilities support to plant capital investment includes replacement and modernization of obsolete facilities, maintenance of existing facilities, energy conservation, compliance with environmental and OSHA standards, and NATO infrastructure facilities funds.

(1) Military Construction Program
Program (MCP)

(a) Living and Working
Conditions

Many of our military people are living and working in old, crowded, and decrepit facilities that affect our readiness, cause low morale, and contribute to attrition. The facilities shortage amounts to about \$47 billion, \$10 billion of which is in Europe. In the FY 1983 MCP, we have especially emphasized improving the living and working conditions for our troops in Europe. The budget shows we plan an accelerated reduction of the real replacement and modernization backlog with emphasis on the replacement or modernization of medical treatment facilities, unaccompanied personnel housing, dependent schools, community support facilities, and operational and training buildings. We have directed 47 percent of the \$648 million European construction budget to alleviating unsatisfactory living and working conditions.

(b) NATO Infrastructure

In FY 1983, \$375 million is required as our contribution to this multi-nation construction program to support the high priority initiatives of Theater Nuclear Force modernization and the Long-Term Defense Program. This funding level reflects our commitment to a strong and effective North Atlantic Alliance.

(c) Indian Ocean/Persian Gulf
(IO/PG) Facilities

The FY 1983 Military Construction request includes approximately \$421 million for strategic IO/PG facilities; \$340 million and \$441 million were approved in FY 1981 and FY 1982, respectively. FY 1984 and FY 1985 facility construction of about \$426 million will complete our near-term requirements in this vital area.

The FY 1982 Supplemental Budget request contains an additional \$106 million for IO/PG facilities.

(d) Family Housing Program

Our FY 1983 Military Construction Program includes \$2.7 billion for family housing. We are especially emphasizing improving the housing, particularly in Europe, by reducing the maintenance, repair, and improvement backlog. About \$400 million will be devoted to this purpose. The family housing request contains \$490 million for construction which includes acquiring 3,286 units, primarily at installations experiencing substantial increases in people, and post-acquisition construction work on existing units. The operation and maintenance of the 415,000 unit family housing inventory requires about \$2.4 billion, including utilities, police and fire protection, refuse collection, routine maintenance, and investments to reduce the maintenance and repair backlog to an acceptable level. We need funding of \$162 million to lease approximately 29,000 housing units, principally to support families assigned to overseas areas.

(2) Real Property Maintenance
Activities (RPMA)

The RPMA program provides funds for a host of functions related to the operation and maintenance of our real property facilities, including maintenance and repair, minor construction, utilities, and other engineering services, e.g., janitorial, engineering design, administration. The condition of our facilities has been steadily declining during the past two decades because of inadequate funding, inflation, and the growing age of plant assets. The unfunded backlog of maintenance and repair work has grown 65 percent over the past three years to nearly \$1 billion at the end of FY 1981. For FY 1983, we have budgeted \$7.4 billion for RPMA; a 56 percent increase over FY 1980, and we plan to achieve additional real budget growth in this area in each of the following four years.

(3) Energy Conservation Investment Program (ECIP)

Executive Order (EO) 12003 requires that we reduce the energy we consume in existing facilities 20 percent by 1985 (compared to 1975 use). The ECIP provides funding to accomplish permanent energy conservation retrofits to existing facilities that will achieve a 12 percent reduction; we will achieve the remaining eight percent from operational efficiencies and maintenance improvements. In addition to serving as the basis for complying with EO 12003 and Section 547 of the National Energy Conservation Policy Act, ECIP will save us significant long-term energy costs and improve our mission support. Investments in this program, about \$776 million during FY 1976-82 have had an average amortization period of less than five years.

(4) Pollution Abatement

Our Defense installations must comply with the requirements of all environmental laws, including the Clean Air and Water Acts and the Resource Conservation and Recovery Act. Although we have made significant progress, a number of our installations continue to violate standards and need retrofit projects to make them comply. The FY 1983 Budget includes funding for improvements to sewage treatment facilities, oil spill prevention projects, solid and hazardous waste management facilities, and air controls from heating plants and fuel storage facilities.

(5) Prevention of Accidents and Occupational Illnesses

We must reduce the accidental loss of material resources and the incapacitation of people from injuries and work-related illnesses. The FY 1983 Budget contains funding for correcting serious workplace hazards and for strengthening safety and occupational health training and surveillance.

d. Logistics Management and Support

(1) Supply Programs

We are continuing our efforts to centralize Defense Logistics functions in the hands of single-agency wholesale managers without degrading overall force capability. Toward this end, we are transferring inventory management responsibility for 200,000 Service-managed consumable items to the Defense Logistics Agency (DLA). We estimate the transfer will result in recurring savings of approximately \$15 million per year. We will evaluate the results of this project in terms of readiness impacts and costs before deciding whether to transfer additional consumable items from the Services to DLA. The assignment of single-Service managers for multi-Service nonconsumable items is scheduled to be completed by December 1982.

By early 1983, DoD Components will begin executing a new DoD-wide policy for computing war reserve spare and repair parts requirements. This policy will help us evaluate sustainability and determine overall war reserve funding priorities.

We are implementing a program to introduce the use of bar code markings in the DoD distribution system. We will use existing computers to process the bar code information and maintain logistics data bases. We estimate resulting annual savings from improved inventory control and materiel processing will exceed \$100 million.

(2) Maintenance Programs

Over 800,000 people maintain our weapon systems and equipment and that maintenance represents annual costs of \$22 billion. We have established an Aeronautical Depot Maintenance Management Task Force to improve how we manage depot maintenance. Initiatives are underway to size depot capacity to meet mobilization requirements and to operate as efficiently as possible in peacetime. We expect our increased emphasis on interservice support alternatives to reduce the need for new capital investment. We are applying the Reliability Centered Maintenance (RCM) concept extensively to aircraft, engines, ships, and ground vehicles, resulting in reduced maintenance requirements, reduced costs, and enhanced safety and availability. In addition, we are evaluating the RCM concept for applicability to additional items and systems.

(3) Productivity Enhancement

To increase the productivity and efficiency of our industrial-type facilities, we are providing increased authority to industrial fund managers to purchase modern labor-saving equipment. Starting in FY 1983, capital equipment items will be charged to industrial fund cost-of-operations through a depreciation charge, over the useful life of the equipment, instead of being purchased through the procurement accounts.

(4) Traffic Management, Land Transportation, and Ocean Terminal Operations

The Military Traffic Management Command's (MTMC) Contingency Response Program (CORE) has developed and matured considerably through close coordination with industry and other federal agencies and through exercises. The CORE program provides the means to determine availability of industry resources in an emergency situation. Construction/upgrade programs for improving ammunition outload capabilities are on schedule and will be completed by September 1982. I have approved a major realignment of functions between the MTMC and the Military Sealift Command (MSC) to improve how responsively and efficiently we manage and deploy traffic. The first step was the consolidation of cargo offering and booking activities under MTMC. By October 1982, we will have strengthened

the Joint Deployment Agency and consolidated MTMC and MSC into a single command.

3. Conclusion

This Administration is dedicated to improving our inadequate logistics posture. Force readiness and combat staying power are the two areas we have identified that require our priority attention. We are committed to making our forces ready and able to accomplish any mission successfully in support of our national objectives. Revitalizing our logistics programs, begun this year, will let us reach that goal.

M. MANPOWER1. Introduction

This Administration is determined to meet our peacetime military manpower requirements with volunteers. We are convinced that with the proper level of pay incentives, bonuses, and educational incentives; attention to quality of life issues; and adequate resources for recruiting, we can attract and retain enough qualified men and women to meet our military needs. We are confident that the All Volunteer Force (AVF), properly managed, can work. In addition to meeting our manpower needs with a volunteer force, we are committed to improving our readiness by emphasizing military training and more efficient use of our civilians.

Table III.M.1 shows our FY 1983 manpower strengths and compares them to FY 1981 and FY 1982. In FY 1983, active military strength increases by 66,000 over FY 1981 and by 38,000 over FY 1982.

TABLE III.M.1

Defense Manpower Strengths
(End Strengths in Thousands)

	<u>FY 1981 Actual</u>	<u>FY 1982</u>	<u>FY 1983</u>
Active Military	2,082	2,110	2,148
Selected Reserve	899	946	1,000
Individual Ready Reserve/Inactive National Guard	419	411	435
Standby Reserve	64	50	40
Military Retirees <u>1/</u>	134	219	360
Civilian <u>2/</u>	1,019	1,034	1,035

1/ Only those retirees who would be mobilized.

2/ Excludes civil functions.

Total manpower costs are 41 percent of the planned FY 1983 budget outlays, 7 percent less than in FY 1981. These costs compare favorably with manpower costs in labor-intensive industries which run about 48 percent of expenditures.

The remainder of this section discusses the highlights of the Department's manpower program. You will find detailed discussions in the Defense Manpower Requirements Report, which we will send to Congress on March 8, 1982.

2. The Manpower Programa. Active Force(1) Current Manning Levels

The following table presents our current and projected active duty manpower strengths. We plan to increase the number of active military people in FY 1983 by 66,000 over FY 1981 levels.

TABLE III.M.2

Active Military Manpower
(End-Strengths in Thousands)

	<u>FY 1981</u>	<u>FY 1982</u>	<u>FY 1983</u>
Army	781	784	784
Navy	540	553	569
Marine Corps	191	192	195
Air Force	<u>570</u>	<u>581</u>	<u>600</u>
DoD Total	2,082	2,110	2,148

(2) Recruiting

FY 1981 was an excellent recruiting year from both a qualitative and a quantitative perspective. All four Services achieved their recruiting goals. Table III.M.3 shows the actual and planned Service enlisted accessions for FY 1980 through FY 1983. FY 1983 total DoD accession requirements are higher than those for FY 1981. This means that recruiting in FY 1983 will be a real challenge.

TABLE III.M.3

Actual and Planned Enlisted Active Duty Accessions
(Numbers in Thousands)

	Actual					
	FY 1980		FY 1981		Planned	
	Number	Percent of Objective	Number	Percent of Objective	FY 82 Number	FY 83 Number
Army	173.2	100	137.9	101	130.6	150.3
Navy	97.7	101	104.3	102	93.3	106.0
Marine Corps	44.3	101	44.0	103	44.3	44.2
Air Force	<u>74.7</u>	100	<u>81.1</u>	100	<u>75.0</u>	<u>81.3</u>
DoD	389.8	101	367.4	101	343.2	381.8

Table III.M.4 depicts Service high school graduate recruiting achievements for the last two fiscal years. FY 1981 improved significantly over FY 1980. Each of the Services increased the percent of non-prior service (NPS) high school graduate accessions with the Army having the largest increase in numbers and percentage. All the Services need to sustain or improve the high school graduate enlistment trend started in FY 1981.

TABLE III.M.4

Non-Prior Service Active Duty Accessions
High School Diploma Graduates
Male and Female*

	FY 1980		FY 1981	
	Number	Percent	Number	Percent
Army	85,800	54	94,700	80
Navy	65,800	75	69,700	76
Marine Corps	32,500	78	32,800	80
Air Force	59,300	83	67,400	88
DoD	243,500	68	264,600	81

* Numbers may not add to totals due to rounding.

Congressional restrictions enacted in FY 1980 and FY 1981 limit the proportion of the lowest acceptable test score category (Category IV) recruits and male non-high school graduates that can be accepted. Table III.M.5 summarizes these restrictions.

TABLE III.M.5

Congressional Controls on Recruiting
in FY 1981/FY 1982 DoD Authorization Act 1/

<u>Fiscal Year</u>	<u>Maximum Percent</u> <u>Category IVs</u>	<u>Minimum Percent</u> <u>High School Graduates</u>
1981	25% DoD Average	Army Males - 65%
1982	25% Each Service	Army Males - 65%
1983+	20% Each Service	No Restriction

1/ Beginning in FY 1982 Congress added the constraint that the Services may not enlist non-high school graduate Category IV recruits.

Table III.M.6 shows that the Services achieved the Congressional quality constraints in FY 1981. The more stringent limitations on Category IV accessions in FY 1982 will be a challenge for the Army. This problem

will become even more serious in FY 1983 when the Category IV ceiling drops to 20 percent for each Service.

TABLE III.M.6

FY 1981 Non-Prior Service (NPS) Active Duty Accessions

<u>Service</u>	<u>Percent of NPS Who Were Category IV ^{1/}</u>	<u>Percent of NPS Male Accessions Who Were High School Diploma Graduates</u>
Army	30.9	77.8
Navy	12.4	73.7
Marine Corps	12.9	78.8
Air Force	7.1	87.6
DoD	17.9	79.0

^{1/} Males and Females.

The Congressional recruiting constraints, expected improvements in the economy, and a continuing decline in the youth population will make recruiting in FY 1983 and beyond an extremely challenging task. We will continue to do everything we can to improve both the attractiveness of military service and its competitiveness in the youth labor market.

(3) Retention and Career Manning

(a) Enlisted

Each of the Services is reviewing its career force objectives. The likely outcome is a force with a richer career content, even if end strengths were not increasing. The larger career force comes from the increased Service retention, changing mission requirements, and the recommendations of external studies. The Services may choose to temper growth in their career forces to some extent by raising reenlistment standards to upgrade the caliber of their career people. The following table compares the programmed FY 1983 career force with FY 1981 and FY 1982.

TABLE III.M.7

Enlisted Career Force
(5 to 30+ Years of Service)

<u>Fiscal Year</u>	<u>Army</u>	<u>Navy</u>	<u>Air Force</u>	<u>Marine Corps</u>	<u>Total</u>
1981	253.4	203.5	240.0	49.5	776.4
1982	294.5	212.2	243.5	50.0	800.2
1983	295.6	222.2	247.0	51.7	816.5

To achieve these career force increases, we must maintain high levels of retention.

Current reenlistment rates are among the highest ever experienced. We attribute this increase in reenlistment to the recently enacted compensation initiatives and to aggressive Service use of reenlistment bonuses. However, this increased retention has not yet proven to be permanent or sustainable over an extended period, and in the short run, does not solve such problems as individual skill shortages, quality, and distribution imbalances. Substantial skill/grade shortages and imbalances exist within the total number of careerists. The Services have started implementing policies and procedures needed to maintain larger career forces and to redistribute careerists into shortage and imbalanced skills.

Each of the Services has substantial shortfalls in mid-career levels. Only consistent reenlistment success over several years can solve these experience level shortfalls. We need five to six years of successful retention to reduce the shortage of personnel with 12 to 20 years of experience. In the meantime, the Services must substitute people with less experience while trying to retain more young and mid-level careerists. To achieve this retention pattern, we intend to capitalize on the reenlistment bonus program. Given an adequate level of compensation overall, we can apply resources to improve retention in selected skills and at selected experience levels where shortages are most severe.

(b) Officers

With few exceptions, we are achieving desired officer accession and retention objectives. Unfortunately, the exceptions are in the high skill, high cost areas, such as pilots, nuclear qualified, engineering officers and specialty physicians.

Each of the Services is short of aviation people. We have started several positive programs to counter these shortages. We believe raising warrant officer flight pay to the same level authorized for commissioned officers eliminated the primary reason for leaving given by departing Army warrant officers. Furthermore, we believe that the recent increase in air crew incentive pay, coupled with the paying of aviation bonuses will, in the long-run, improve aviation personnel retention.

We are also short of Air Force engineers and Navy nuclear trained officers. We believe the principal factor behind these shortages has been the compensation gap between civilian industry and the military. However, we feel we can reduce these shortages to manageable levels by judiciously applying accession and retention bonuses. We anticipate that payment of these bonuses and intensified recruiting directed at college engineering students will enable us to reach our accession and retention goals.

(4) Education Incentive Program

We have completed our review of the test results and analysis from the FY 1981 Educational Assistance Test Program. The test program demonstrated that education benefits can significantly increase the number of high-quality accessions. The test demonstrated also that the enlistees' choice of Service and military specialty varied with how they perceived the relative benefits offered by the different Services.

At this time, we are in the final stages of developing a new education program for military personnel. This program will contain provisions that encourage both the recruitment and retention of high quality personnel. It will be designed to satisfy the needs of the different Services in these areas.

(5) Compensation Initiatives

The momentum from 1980 legislative actions for members of the active duty force continued into 1981. Members of the Armed Forces under P.L. 97-60 received on October 1, 1981, an average 14.3 percent increase in basic pay, Basic Allowance for Subsistence (BAS), and Basic Allowance for Quarters (BAQ). The basic pay increases ranged from 10 to 17 percent for enlisted members, 14.3 percent for officers. In addition to this increase, P.L. 97-60 also continued other compensation and reimbursement improvements.

In FY 1983, we have budgeted for a CHAMPUS dental program for dependents of the active force and improved reimbursements for members on government-directed moves. In addition, we will be asking for an extension of enlistment and reenlistment bonuses for the active force beyond September 30, 1982.

By maintaining military compensation at levels competitive with the private sector, we believe that we will be able to meet our manpower needs with an All-Volunteer Force.

(6) Quality of Life

Quality of Life is a synthesis of many individual DoD programs that recognizes the importance of our Armed Forces people and acknowledges their contributions to the Defense effort. We have directed our efforts toward improving existing programs as well as identifying and generating new programs to help compensate for the demanding aspects of military life. Medical care, family and bachelor housing, child care programs, exchanges, commissaries, recreation and community activities, institutional benefits, education, postal services, credit union sponsorship, and religious programs all fall under the broad umbrella of "Quality of Life." Quality of Life also addresses issues such as policies on tour lengths, assignments, housing allocations, and other non-pay compensation. It includes activities such as financial counseling, lending

closets, family services programs, housing referrals, and social clubs.

We have improved and expanded military compensation, housing, personnel services, and other non-pay benefits. The recent pay increase for military personnel and the \$14.7 million DoD received for construction of 10 child care centers during FY 1982 indicate the success we have achieved. We are establishing family services and support centers and testing around-the-clock child care. Establishing staff offices at the Military Service level to address family needs, further emphasizes our commitment to Quality of Service Life.

Recent analysis of the human dimensions of military life noted that service people are making career decisions based on family issues and their Quality of Life. A significant correlation exists between Quality of Life programs, spouse satisfaction, recruitment and retention of qualified people, and the discipline, morale, and readiness of our forces. DoD's efforts in the last year epitomize our commitment to improving the Quality of Service Life. Our ultimate goal must be to treat each member of the Armed Forces and his or her dependents with compassion, concern, and consideration.

(7) Training

Effective training of military people and units is an essential ingredient of force readiness. We are acting to increase and improve the training provided to our Armed Forces.

Several initiatives are aimed at strengthening the professional training of enlisted people. The Army is starting a program for longer and more intensive training of new enlistees. An added week of training is being used to inculcate discipline more firmly and to train soldiers more thoroughly in the use of weapons. In FY 1983, the Air Force will complete an initiative to raise the average length of skill training courses for new entrants from 11.5 weeks to 12.3 weeks. Most of the increase will be applied to maintenance-related courses. The Navy is expanding its contract instructor initiatives so it can train more maintenance people in electrical and electronics ratings. Use of contract instructors reduces the requirement to divert experienced petty officers, who are in short supply, from the fleet to instructor billets ashore.

The Army is applying additional resources to NCO training in FY 1983 to raise the proficiency of their junior NCOs. The Navy recently established a Senior Enlisted Academy to provide E-8 and E-9 petty officers with advanced leadership and management training.

Like individual service members, military units must be repetitively trained and exercised in their wartime roles in order to achieve and maintain the team skills required for success in war. The amount of air, sea, and ground space required for realistic training has steadily increased over the years, largely as the result of

the longer ranges of modern weapons. At the same time, the increase in non-military demand for air and ground space has constricted the scope of unit training. The rising cost of unit training, particularly costs of fuel and ammunition, demands that all unit training be as effective as possible. The Military Services, by applying modern training technology and commendable ingenuity, have made substantial progress toward providing sound unit training despite these constraints.

In conventional ground maneuver training, we have never before been able to track the course of the battle between opposing forces with full objectivity--that is, to determine the effect of weapons fire. The Army is completing the development of an instrumentation system at the National Training Center that will overcome this obstacle. Vehicles and people on each side are fitted with laser detectors and direct fire weapons are fitted with laser emitters. Hits and near misses are signaled, thus helping to teach the participants the tactics and techniques necessary to accomplish their missions without suffering avoidable casualties. Furthermore, the details of the battle are transmitted to a central control station that provides visual displays that become the basis for post-exercise critiques. Using this system, an opposing force maneuver becomes a profound learning experience that will stand our forces in good stead in the shock of actual combat.

We can use other applications of simulation at a unit's home base to provide realistic training that otherwise would not be available because of constraints on training spaces and ranges. The Army has been testing a conduct-of-fire trainer, a highly capable computer-driven simulator used to train tank commanders and gunners on the M-1 tank. The trainer is planned for use at the training base and at operational tank units. Training of this type would be particularly valuable in Europe where enough range space is not available to assure year-round tank gunnery proficiency. Such readiness dividends are the primary goal of simulation, while savings in fuel and ammunition should be regarded as secondary, albeit highly desirable, goals.

The Navy is increasing its use of simulators that allow a ship's crew to conduct tactical exercises in air defense or anti-submarine warfare while the ship is in port. The simulator, housed in a mobile van parked on the pier, is plugged into the ship's operating systems and provides realistic practice. The payoff is increased readiness.

In summary, the FY 1983 President's Budget continues and reinforces the emphasis on improved training we began in the amendments to the FY 1982 budget.

b. Reserve Components

(1) Selected Reserve Units

We have targeted the current Reserve program to produce trained strength in units equal to

wartime requirements by 1986. During FY 1981, we added 48,200 to the Selected Reserve strength. These strength improvements follow substantial gains during FY 1979 and FY 1980. All of the Reserve Components except the Army National Guard, the Army Reserve, and the Naval Reserve are near their wartime requirements. At the end of FY 1981, the Army Reserve Components remained at about 175,000 trained personnel in units below their FY 1986 wartime objectives. Based on the increase of 37,700 during FY 1980 and 41,000 in FY 1981, we may realistically assume that they will achieve these objectives.

We attribute the significant turnaround in the Reserve strength to three positive programs:

- incentive or bonus programs for enlistment and reenlistment,
- intensified programs for recruiting and retention, and
- more meaningful training and other initiatives that improve the attractiveness of Selected Reserve membership.

We do not envision significant changes in Selected Reserve incentives. We will continue to refine their application to acquire and retain the manpower levels and skills required for mobilization. Recruiting and retention initiatives that we are pursuing include alternative enlistment options of three or four years in the Selected Reserve, an option for completing initial training in two separate increments, increased joint-Service advertising, and a full-time recruiting force for each Reserve Component. We are increasing the full-time active duty Guard and Reserve support to units to assist unit commanders in improving the training and administration of their units.

(2) Pretrained Individual Manpower

Pretrained Individual Manpower consists of Individual Mobilization Augmentees (IMA), members of the Individual Ready Reserve (IRR), members of the Inactive National Guard (ING), members of the Standby Reserve, and retired military personnel. Currently not enough manpower is available to meet the Pretrained Individual Manpower mobilization requirement, and this constitutes one of our most serious manpower problems. The IMAs are the primary source of these individuals due to their immediate availability. The IRR, the largest group, has increased from its low point of 342,000 in June 1978 to 419,000 at the end of FY 1981. We anticipate further increases but they will not be enough to meet mobilization requirements. We have begun a number of low cost or no cost initiatives that have had a positive effect. Some of these are:

- The initial benefits of the 1978 legislation giving women a six-year service obligation were realized during FY 1981 as women completed their three-year tours of active duty and were transferred to the IRR;
- The effect of the 1979 legislation giving enlistees 26 years of age and older a six-year service obligation will result in 1982 increases in IRR strength;
- Transfers from the IRR to the Standby Reserve during the last or sixth year of obligated service were terminated in 1979;
- Screening of individuals leaving active duty and the Selected Reserve before the end of their obligated service is continuing to ensure that we discharge only those with no mobilization potential and transfer the remainder to the IRR;
- The Army is continuing a test of two-year active duty enlistment that results in people spending more time in the IRR;
- The Army National Guard is expanding the Inactive Guard program to permit the continued unit affiliation of Guard members who no longer train with their units;
- Mobilization procedures for Standby Reservists have been streamlined as a result of legislation eliminating the requirement that the Director of Selective Service declare Standby Reservists available before DoD can mobilize them; and
- An IRR reenlistment bonus of \$600 was tested in FY 1981 to encourage unobligated members to reenlist for three years in the IRR or the ING. Congress did not extend the authority for both bonuses for FY 1982. Since the IRR bonus began to provide positive results at year-end, we plan to propose its reinstatement at an increased amount.

We are also continuing several initiatives to improve the management, training, and readiness of pretrained manpower. These initiatives are as follows:

- Personnel management continues to improve with better tracking and location procedures, more frequent contact, faster mobilization notification procedures, and peacetime refresher training;
- The Air Force's program of preassigning Individual Reservists (designated as Individual Mobilization Augmentees) in peacetime to mobilization positions with active force organizations is being implemented in the other Services beginning in FY 1982; and
- Service programs are expanding to identify the mobilization positions retirees can fill, to establish personnel files on retirees, and to assign retirees to mobilization positions. The Army issued preassignment orders to over 85,000 officers and enlisted retirees in late 1981.

We are developing a comprehensive program to eliminate the pretrained manpower shortfalls. This program's long lead-time solution is to extend the six-year military service obligation to eight years. However, in the interim before that change yields increased strength in the IRR, we need incentive programs to retain members in the IRR and to encourage their enlistment in the IRR. These incentive programs can be phased out as IRR strength increases and the effect of the service obligation extension begins. We are also proposing that full-time Servicemen's Group Life Insurance (SGLI) eligibility be extended to the entire Ready Reserve, including the IRR. Finally, we are proposing a direct IRR enlistment program for the Army which we expect to provide an increase of 5,000 during FY 1983. We believe that this program will not only reduce pretrained manpower shortfalls in the short-term but also provide a permanent solution.

c. Civilians in the DoD

(1) Composition of the Civilian Workforce

In the past, the tendency has been to view the Department's Federal civilian employees as basically serving in bureaucratic overhead functions, a perception not founded in fact. In fact, the majority of the DoD civilian work force can be directly related to the readiness of the operating forces of the Armed Services. They are the major source of effort for fulltime support of the Reserve Forces and depot level maintenance of ships,

aircraft, and weapons systems and the operations of vital shore based activities of the defense forces. Included are such functions as logistics, intelligence, communications, medical, training, research, and engineering acquisition that provide essential defense support services. The Department's civilians are an integral part of our total force defense posture.

In FY 1983, the DoD will employ 947,000 civilians directly and 88,000 indirectly, for a total civilian workforce of 1,035,000. Indirect hire civilians are foreign nationals employed by their own country in support of U.S. forces. We reimburse the hiring country for this support. About 35 percent of the direct hire workforce are blue collar workers who perform the depot level repair and maintenance, maintain the military installations, and man the production lines in government owned manufacturing plants. The remainder of the direct hire workforce, white collar workers, provide the necessary scientific, professional, engineering, technical, administrative, and clerical support.

(2) Current Manning Levels

Our plan is to increase slightly the size of the civilian workforce in FY 1983. A comparison of the FY 1983 program with FY 1982 and prior years is shown in the following table.

TABLE III.M.8

DoD Civilian Employment (In Thousands)

	<u>Actual</u>					<u>Programmed</u>	
	<u>FY 64</u>	<u>FY 68</u>	<u>FY 72</u>	<u>FY 80</u>	<u>FY 81</u>	<u>FY 82</u>	<u>FY 83</u>
Total	1,176	1,393	1,159	990	1,019	1,034	1,035
Direct Hire	1,035	1,274	1,049	916	940	947	947
Indirect Hire	140	119	110	75	79	87	88

Basic government policy sizes the uniformed service no larger than necessary to meet military contingencies and employs civilians in jobs that can be performed by civilians. The civilian work force is an essential element of war fighting capability. When civilian staffing is inadequate to perform necessary functions, uniformed people are diverted from their primary duties to perform these functions, adversely affecting the readiness of their units.

Between June 1974 and September 1980, civilian direct hire wage board and salaried employment declined greatly, initially reflecting reduced Defense

expenditures and ultimately reflecting employment ceilings and hiring freezes designed to control overall Federal employment. The resulting backlogs in depot, shipyard, and installation maintenance and increasing levels of borrowed military manpower adversely affected readiness and uniformed personnel morale. The FY 1981 budget supplement submitted by this Administration resulted in a 14,000 increase in FY 1981 direct hire civilian end strength employment. These civilian personnel increases were dedicated to reducing unacceptable backlogs in depot maintenance, to augmenting procurement, supply, and contract administration. An additional 5,600 indirect hires were employed to reduce the level of borrowed military manpower. However, overall resource constraints require Defense to find ways to do more with less. Major strategies to accomplish our goal are contracting out and pursuing productivity enhancing capital investment and management strategies.

(3) Management Initiatives

(a) Contracting Out

The Defense Department has been a government leader in reducing costs and manpower through economical contracting out of commercial activities. We currently are contracting for services that would otherwise require over 120,000 federal civilian and military employees. By the end of FY 1982, we plan to complete cost comparison studies for about 21,000 civilian and military jobs to determine whether contracting operations is more economical. We also expect a similar level of effort each year from FY 1983 through FY 1987. We hope that Congress will adopt language, similar to the Senate Armed Services Committee proposal in the FY 1982 Authorization Bill, to eliminate the burdensome Congressional reporting requirements on converting small commercial activities to contract. Eliminating the current requirements can speed the conversion process and reduce the cost of conducting detailed cost studies for small activities, which can sometimes offset our potential first year savings.

(2) Improving Productivity

We are keenly aware that we need continuing productivity improvements to realize the full efficiency of the DoD work force. Productivity has been improving at an average annual rate of 2.0 percent since 1972 and we expect it to reach an annual rate of 2.2 percent because of recent initiatives and continued management attention.

Productivity improvement initiatives have focused on major productivity enhancing investments that release resources for higher priority workloads. Under the Productivity Investment Fund (PIF), \$121 million has been earmarked in FY 1983 for productivity enhancing capital investments that we expect to produce a life-time return on investment of approximately \$11 for each \$1 invested. Previous PIF projects for FY 1981 and FY 1982 totaled \$165 million and are expected to generate savings

equivalent to 6,000 manpower spaces beginning in FY 1982. We have structured these expected savings into our requirements.

Other productivity improvement initiatives that we expect will increase our productivity growth are expanded application of operational improvement, performance standards, and employee motivation techniques.

We expect increased management commitment to productivity improvement from an increased focus on the use of goals and the collateral development of improvement plans to support those goals.

(c) Efficiency Reviews

The Services will also be conducting efficiency reviews of their in-house commercial activities, that are not suitable for contracting, in hopes of reorganizing into more efficient operations. It is estimated that it will take about six years to review all commercial activities.

(d) Interservice Support

DoD Components are also conducting studies to determine if duplication of services can be eliminated and economies realized through inter-service and intraservice support agreements.

(e) Management Incentives

We also plan to experiment with several management incentive ideas to encourage defense managers to be more efficient and cost-effective.

d. Health Resources

Recognizing the dual mission of the military health care system, our goal is to maintain a cost-effective system that will satisfy wartime medical support requirements and provide quality care to all beneficiaries as an integral part of military compensation.

(1) Wartime Medical Posture

The most important responsibility of the military health care system is to return to duty as many people as possible in time of war. The beginning of FY 1982 saw the first sizable medical acquisitions for readiness in a decade, but this is only the first increment of what must be done in the years ahead. Of foremost importance is the need to press forward with the speedy acquisition of a hospital ship capability.

Working with the maritime industry, we are in the process of identifying the most capable and cost-effective hulls for conversion to a hospital ship(s) with an aggregate definitive care capability of 24 operating rooms and 2,000 beds. Delivery of the ship(s) is anticipated in the mid to late FY 1985.

In CONUS, the Civilian-Military Contingency Hospital System (CMCHS) has been implemented and continues to experience strong support from the civilian health care sector. We feel confident that we can have at least 40,000 civilian hospital beds committed to supplement the military system in wartime by March 1982.

(2) Peacetime Medical Posture

In peacetime, the military Health Services System has a dual role: to provide a source of trained health professionals ready to deploy during mobilization and to provide a source of quality medical care to active duty and retired personnel and their dependents. Care for people is an integral component of military personnel compensation policy and is provided through a direct-care system of military hospitals and clinics and through the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS).

Our goal is to make this system as cost-effective as possible, while still satisfying both mobilization and compensation requirements. To this end, we have recently implemented a number of initiatives designed to improve the management of our medical resources, including:

- a uniform chart of accounts that for the first time provides uniform costs and work load data for tri-service analysis;
- an eligibility/enrollment system that not only will identify the size and distribution of the beneficiary population, but also will help reduce fraudulent use of the system by non-eligible persons;
- a unified, tri-service approach to the application and acquisition of computerized hospital information systems; and
- the elimination of overlapping missions among the Services.

These initiatives support our goal of a cost-effective direct care system capable of satisfying mobilization requirements.

(3) Pretrained Medical Manpower

The General Accounting Office Report "Will There Be Enough Trained Medical Personnel In Case of War?", published on June 24, 1981, concluded that the number and types of medical personnel in the Active and Reserve Components falls far short of the total projected wartime requirements. Our response is a positive, aggressive program to address the 19 specific recommendations made in the report.

A major objective is to increase the availability of pretrained medical manpower to both the continental United States and overseas military medical facilities during wartime. Initiatives are currently underway to evaluate the feasibility of pre-contracting civilian medical specialists for use in stateside military hospitals and to recruit and retain more critical medical specialists in the Reserve Components.

To address Reserve Component medical issues better, we established a Reserve Components Medical Council on August 25, 1981. The Council is a forum for senior Guard and Reserve medical general/flag officers to address major issues affecting medical readiness and to propose plans, programs, policies, and procedures to resolve the problems. Additionally, I have established a Director of Reserve Forces Medical Planning position on my staff to integrate Active, Guard, and Reserve Medical Forces into the total medical support system.

e. Personnel Management

(1) Composition and Distribution of Minorities in the Active and Selected Reserve Forces

(a) Active Forces

In FY 1981, 30.2 percent of the enlisted force were minority personnel (21.9 percent Black, 4.0 percent Hispanic, and 4.3 percent Other). The Army (41.2 percent) has historically had the highest minority content and the Navy, the lowest. Part III.M.1 shows the percentage of minorities in the active duty enlisted force by service from FY 1971 to FY 1981. During this 10-year period, minority enlisted women increased from two-tenths of 1 percent to approximately 3 percent of the total force and from 18.7 percent to 32.8 percent of the total number of enlisted women.

In FY 1981, 9.1 percent of the officer force were minority people (5.2 percent Black, 1.2 percent Hispanic, and 2.8 percent Other). Part III.M.2 shows the percentage of minorities in the officer force by Service from FY 1971 to FY 1981. The number of minority women in the total active officer force increased from two-tenths of one percent in 1971 to approximately 1.5 percent in FY 1981 and from 5.5 percent to 15.9 percent of the total number of active duty women officers. The significant minority strength increases over the 10-year period reflect the intensive procurement efforts by all Services.

The percentage of all active duty officers who are black has more than doubled since 1971, although the number of black officers is less than representative of the total black population, black officer accessions are roughly proportional to the black college graduate population.

CHART III.M.1

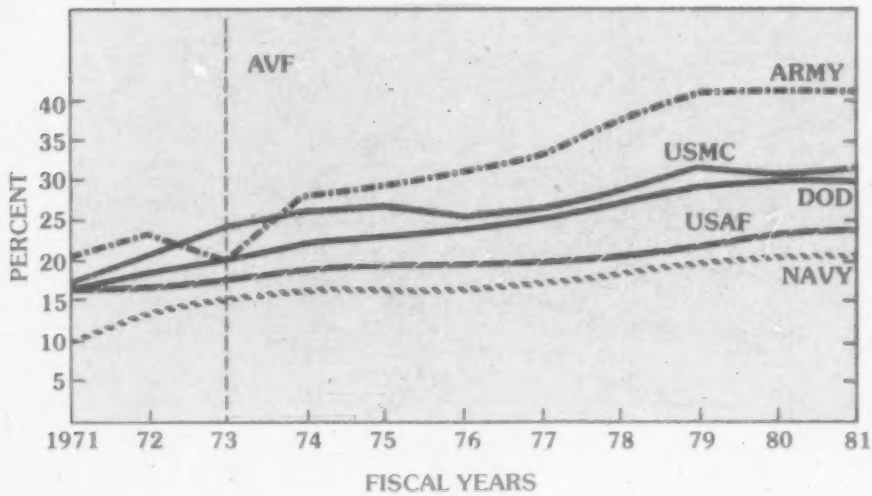
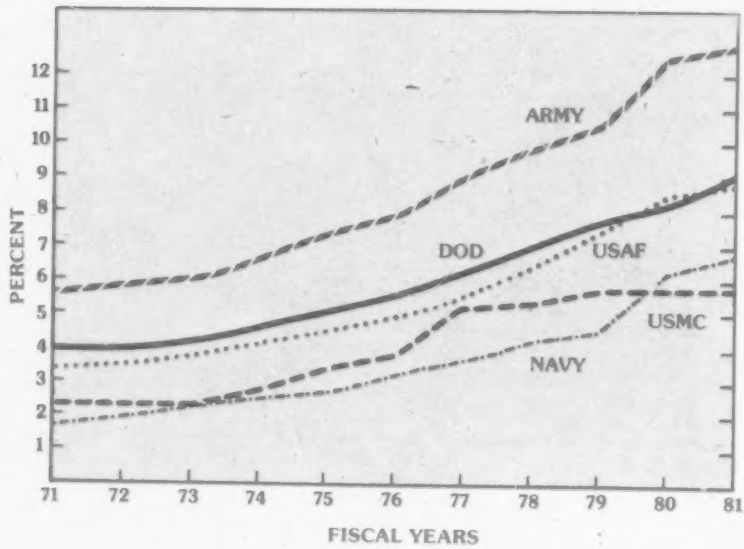
**MINORITIES AS A PERCENTAGE OF
ACTIVE DUTY ENLISTED END STRENGTHS**

CHART III.M.2
**MINORITIES AS A PERCENTAGE OF ACTIVE
DUTY OFFICER END STRENGTHS**



(b) Selected Reserve Forces

The proportion of enlisted minorities in the Selected Reserve has continued to increase. In FY 1971, the enlisted minority content was less than four percent. In FY 1981, the content reached 21 percent of which 18 percent were black. The Army Reserve has the highest minority content with 31 percent; the Air National Guard, the lowest with 10 percent. Approximately 1.5 percent of the total Selected Reserve enlisted force are minority women; however, minority women make up 17.2 percent of all females in the enlisted force.

Minority officers make up six percent of the Selected Reserve officer force (four percent Black, two percent Other). The Naval Reserve has the highest percentage of minorities with nine percent; however, only one percent is black. The Air Force Reserve has the lowest minority content of three percent (two percent Black, one percent Other). Minority women make up nine-tenths of one percent of all officers in the Selected Reserve Force and 17.2 percent of all female officers. The percentage of minority officers in the Selected Reserve Forces has significantly increased since FY 1971, but still remains below our desired levels.

(2) Women in the Military

In the past 10 years, the numbers of women in the active force have increased from about 1.5 percent to approximately 8.8 percent. In FY 1980, the Department of Defense set FY 1986 aggregate goals for the Services at 233,600 enlisted women and 31,900 officers, or about 12.5 percent of the planned total DoD active duty end strength for FY 1986. This target participation level was based on equal opportunity considerations and the need for greater utilization of women to meet military manpower requirements associated with the AVF. The Services expressed varying degrees of concern about their ability to achieve the increases and the possible adverse effects they might have on mission capability. These concerns did not abate, and in 1981 all Services except the Navy began special reviews of gender-related programs and policies. The Navy has had a continuing review in this area. Of the special reviews, the Army's is the most comprehensive. It is being conducted by an ad hoc study group, and is scheduled for completion in mid-1982.

Because of the continuing concerns and the diverse Service efforts, I directed the Assistant Secretary of Defense for Manpower, Reserve Affairs, and Logistics in March 1981 to conduct a review with the Services of their female officer and enlisted accession and retention policies. The results of the review were published by the Defense Department in October 1981 in the Background Review -- Women in the Military. It reports on the accession and representation of active duty women over the past 10 years, their promotion rates, and individual Service program development methodologies. In an effort to provide a balanced perspective, data for both men and women were used wherever possible.

General conclusions from this review are: (1) in general, military women are doing an excellent job, (2) military women are an integral part of the entire manpower issue and should not be addressed in isolation from all other aspects of personnel management, and (3) since the understanding and evaluation of Service-unique issues is complex and difficult, more latitude should be given the Services in their management of women as a part of their total force with oversight exercised by OSD functional area managers. The review also looked at personnel management concerns such as performance, time lost from the job, sole parents, military couples, physical strength considerations, and initiatives designed to integrate women into the total force successfully. Attitudinal survey data, analyses of promotion rates, and various tests and evaluations conducted in the past, show that women individually perform their assigned tasks as well as men and generally perform in a work group as well as men, if properly led and trained.

As to the integration of men and women into successfully performing teams, initiatives must be continued to: (1) develop physical job standards and programs designed to test and assign individuals to skill areas based on their abilities to meet these standards; (2) ensure availability of adequate uniforms and equipment for women; and (3) conduct appropriate leadership and supervisory training to ensure both women and men experience a supportive job environment. These areas will continue to receive management attention and the application of resources.

While we can compile no overall summary of future programs until the Army announces the results of its policy review, we expect the total number of military women will continue to increase. The Defense Department will continue to develop and implement initiatives to better integrate these larger numbers of women into the military.

Military women are now playing and will continue to play an integral and vital role in our nation's defense. The large numbers of women being recruited by all Services substantiate their important contribution. In FY 1982, the Services will recruit over 40,000 women for active duty, a level we expect to continue over the next five years. We will continue to evaluate the accession levels for military women from all perspectives, including that of equal opportunity, which remains an important consideration in our program development.

(3) Defense Officer Personnel Management Act (DOPMA)

At the close of 1980, the Congress passed the Defense Officer Personnel Management Act (DOPMA) culminating over seven years of effort to bring about reform and modernization of laws governing the appointment, promotion, and tenure of active duty commissioned officers. This legislation, which became effective on September 15, 1981,

provides, for the first time, a uniform system of management for commissioned officers in the Services. We appreciate the efforts of the Senate and House Armed Services Committees in working with us, since efforts began in 1973, to produce this legislation which enables the Services to manage equitably the career patterns of commissioned officers while at the same time meeting force requirements.

(4) General and Flag Officer Strengths

We are working on legislation for submission to Congress in CY 1982 to modernize and reform laws governing the strength requirements for general and flag officers. This legislation is a follow-on to initial changes in DOPMA that standardize general and flag officer tenure, promotion, and separate provisions in law, and legislation that was submitted last year that would repeal minimum grade requirements for certain general and flag officer positions in law. We expect this legislation to establish a permanent basis for justifying general and flag officer requirements, their accountability, and their relationship to civilian executive requirements in the Defense Department. We solicit your support in this much needed and long overdue effort.

(5) Financing Military Retirement Costs on an Accrual Basis

The Defense Department continues to urge consideration of proposed legislation to change the way the budget accounts for military retired pay. The budget now reflects only the annuity outlays for military people who have already retired. Under the proposed legislation, the budget would reflect the future retirement benefits accrued by military people still on active duty or reserve duty. This change is designed primarily to improve personnel management by focusing attention on retired pay costs that we can control. Providing this important management reform would not add any significant cost.

3. Conclusion

We intend the FY 1983 manpower program to insure that enough capable, trained men and women volunteers are available to meet our military strength and readiness requirements. The program makes full use of civilians to do essential jobs that do not require military people. I am certain that the implementation of this program will achieve the objectives we have set.

N. MOBILIZATION

1. Introduction

Mobilization is:

- "The act of preparing for war or other emergencies through assembling and organizing national resources," and
- "The process by which the Armed Forces or part of them are brought to a state of readiness for war or other national emergency. This includes activating all or part of the Reserve Components as well as assembling and organizing personnel, supplies, and materiel."

This Administration has stressed the importance it places on improving our plans and capability to respond to worldwide crisis situations. Mobilization is critical to our ability to respond to any emergency or crisis.

During the past year, we have improved our mobilization planning processes, increased interagency communications and coordination, and developed solutions to specific resource problems. We have also increased the speed with which we process inductees and developed a system to compute our additional civilian manpower mobilization requirements. We continue to solve problems identified in previous mobilization exercises and will test these solutions in a new series of exercises.

2. Mobilization Planning

a. DoD Master Mobilization Plan

The complexity and magnitude of the mobilization process dictate that sound planning is essential for success. The DoD Master Mobilization Plan (MMP) identifies mobilization responsibilities and describes the related tasks to be performed both during peacetime preparation for a crisis and during mobilization. Its fundamental purpose is to provide the framework for making mobilization decisions and managing the mobilization process.

We have revised and expanded previously published versions of the MMP. Additions include guidance on mobilization policy, information on the legal basis for mobilization actions, and action plans for making key mobilization decisions. During the coming year, we will continue to revise the MMP, develop detailed plans for executing various mobilization tasks, identify needed resources, and perform preliminary force expansion planning appropriate for a protracted multi-theater conflict.

b. DoD Crisis Management Planning

PROUD SPIRIT, a FY 1981 DoD exercise, tested our procedures for mobilization and deployment processes under the threat of imminent hostilities. An independent, senior-level evaluation team, familiar with Defense mobilization requirements, concluded, inter alia, that the Office of the Secretary of Defense (OSD) should plan in advance the functions, responsibilities, authorities, procedures, and relationships inherent in a crisis management system.

We have taken the first steps to develop such a system by examining a major mobilization contingency and identifying its crisis management steps and responsibilities. During the coming year we plan to develop a tailorable crisis management organization, together with the requisite procedures and support systems, to assist OSD in managing crisis-related actions. We also plan to design and conduct an exercise of the organization and supporting systems.

c. DoD Resource Needs

In 1977-78 DoD developed the Wartime Manpower Program system (WARMAPS). WARMAPS is the DoD-wide source for the phased wartime military manpower data. Originally, the system was developed as a program review tool. However, as we have used the data, its value in mobilization planning has also been demonstrated. Therefore, this year we are revising the WARMAPS governing instructions to emphasize its mobilization planning role.

The WARMAPS revision will also correct another deficiency identified during the PROUD SPIRIT exercise: the lack of adequate procedures for computing our civilian work force mobilization requirements and communicating those requirements to the other Federal agencies that would manage the national civilian work force mobilization. The revised directive:

- clarifies the responsibilities of the OSD staff, the Military Departments, and the Defense Agencies for planning and executing civilian work force mobilization;
- requires plans and detailed procedures to ensure both the DoD and the defense industrial base have adequate numbers of skilled civilian manpower in time of emergency and mobilization;
- describes interagency responsibilities and activities in managing the national civilian work force;
- outlines the national process for determining the priority and allocation of civilian manpower; and

- provides emergency authority for selecting and hiring additional DoD civilians in a national emergency.

Exercise PROUD SPIRIT also identified the lack of adequate detailed estimates of civilian work force requirements by occupation and location. Furthermore, the Department of Labor did not have current emergency plans sufficiently in place to supply and manage the increased numbers of people required in the civilian work force during mobilization.

In an effort to solve these problems, the Secretary of Labor and I agreed to establish a co-chaired interagency task force to plan for the management of the civilian work force during mobilization. The Office of Personnel Management and the Federal Emergency Management Agency will also participate in this task force. The task force is conducting an investigation of the potential civilian work force issues which may arise in managing a variety of military installations and Defense-related industrial activities, e.g., prioritization of personnel in certain critical skills. The results of this investigation will be available later this year.

d. Federal Mobilization Planning

Both the PROUD SPIRIT exercise and recent peacetime emergencies underlined a serious shortcoming in federal emergency planning: the lack of capability to respond rapidly and effectively to wartime and major peacetime emergencies. To solve this problem, the President has established the Emergency Mobilization Preparedness Board (EMPB) chaired by his Assistant for National Security Affairs. The objective of the EMPB is to improve the nation's capability to respond appropriately and effectively to an emergency requiring mobilization of resources.

The EMPB has established 12 Working Groups to address selected areas. DoD is a member of 10 Working Groups and chairs two.

My Assistant Secretary for Manpower, Reserve Affairs and Logistics is the Chairman of the Military Mobilization Working Group with representatives from eight other Federal agencies. The mission of this working group is to identify critical military mobilization preparedness actions and to formulate policy issues and recommendations, including budget changes, where the current lack of policy decisions impedes action. They have begun to develop the most likely scenarios, with DoD requirements for these scenarios, by revising existing contingency scenarios based on current Administration policies.

The Director of the Defense Communications Agency, serving in his dual capacity as Manager of the National Communications System, is the Chairman of the Emergency Communications Working Group with representatives from 13 other Federal agencies. Their mission is to identify critical issues affecting the emergency preparedness of

the Nation's telecommunications and to formulate recommendations. To date, a sub-working group task force has developed comprehensive lists of issues which must be addressed and are prioritizing these for senior working group consideration.

e. DoD Mobilization and Deployment Steering Group

The purpose of the DoD Mobilization and Deployment Steering Group is to ensure a credible, responsive DoD capability for all levels of mobilization and force deployment. The Group, chaired by the Under Secretary of Defense (Policy), and composed of executive-level officials from the Office of the Secretary of Defense (OSD), the Military Departments, and the Military Services, meets monthly to promote major mobilization initiatives. Recent initiatives have dealt with DoD representation and goals for the EMPB; OSD crisis management organization; Exercise PETITE ROUNDTABLE follow-up; legislative and regulatory impact on mobilization; industrial responsiveness and preparedness improvements; and development of a basic approach to total mobilization planning within DoD. The Group plays a key role in DoD mobilization planning by focusing both high level attention and resources on significant mobilization problems.

3. Selective Service System

Inductees become an important source of mobilization manpower after they receive the legally-required minimum 12 weeks of training. Obviously, the sooner they begin training, the sooner they will be available. The Selective Service System has the responsibility for meeting the manpower requirements of our inductee reception schedule.

The Director of the Selective Service and I continue to coordinate efforts and procedures that will provide the required mobilization support. The Selective Service System has nearly completed its two year revitalization effort that will enable them to begin conscription rapidly during a crisis period. Furthermore, they have initiated and developed a successful program to nominate and train more than 10,500 volunteer Local Board members.

The Department of Defense and the Selective Service System opened a joint computer facility at Great Lakes Naval Training Station to handle peacetime processing of registration and military accession data and to control the mass data to be exchanged during mobilization. The joint computer center provides the Selective Service System with an improved capability to issue induction orders quickly to large numbers of registrants. This improvement, combined with peacetime registration, enables the Selective Service to provide the first inductee 13 days after mobilization and 100,000 inductees within 30 days of mobilization.

4. Mobilization Exercises

Our mobilization directives and plans were assessed and tested last year by reviewing previous mobilization exercise critique items and by participating in command post exercises. Exercise and evaluation of our mobilization plans and procedures, under simulated crisis conditions, significantly improves the quality of these plans and procedures. We will continue to stress the importance of repeated assessment of our plans in these exercises.

a. Remedial Action Projects

Past mobilization exercises revealed inadequacies and limitations in mobilization plans and procedures. Each deficiency was evaluated and assigned to the applicable agency for correction. Remedial actions for a majority of previously identified problems are underway. Improvements have been made in management and organization of mobilization plans and policy, industrial preparedness, medical support, military and civilian personnel, Reserve Components, logistics, and DoD/civil agency communications.

b. Exercise POTENT PUNCH

POTENT PUNCH was a JCS-sponsored Command Post Exercise (CPX) designed to examine our ability to reinforce Korea and to exercise the mobilization and deployment process from CONUS during a period of rising tension and simulated warfighting conditions. All major elements of DoD participated in the exercise. The results of the exercise helped us to:

- determine the adequacy of existing mobilization plans, systems, and procedures;
- determine the limitations and shortfalls of manpower and logistics procedures required to support mobilization and deployment; and
- exercise and evaluate reserve mobilization procedures.

c. Exercise PETITE ROUNDTABLE

PETITE ROUNDTABLE provided the opportunity for senior civilian and military officials to discuss some of the issues DoD would have to consider during a period of international tensions possibly leading to war. The exercise was designed to:

- portray the variety and complexity of the decisions that must be made during mobilization, stressing the importance of anticipating these decisions in our peacetime mobilization planning;

- create an appreciation for the decision processes and the problems in managing mobilization;
- create an awareness of the opportunity presented by a period of political warning to improve our national deterrent posture and to demonstrate our national resolve through increased readiness; and
- reinforce our commitment to better mobilization planning.

DoD and the Selective Service System will conduct a joint exercise in May 1982, to evaluate the manpower accession process. The exercise will realistically evaluate the plans, procedures and systems to notify and process individuals through the accession system.

5. Mobilization Training Base

a. Improved Army Mobilization Plans

The Navy, Marine Corps, and Air Force do not anticipate any substantial problems in adjusting their training bases to handle projected mobilization training loads. In contrast, the Army faces a number of problems (as revealed in mobilization exercises) in conducting a balanced and timely reaction to the expanded training requirements during mobilization. The major constraints will be sufficient manpower, equipment, and facilities to train the increased number of trainees. The Army is identifying resource requirements to overcome these limitations.

b. Actions to Improve Army Capability

The FY 1982 budget contained a number of initiatives to enhance training capacity and has been followed by further initiatives in the FY 1983 Budget and accompanying Five-Year Defense Program. These include funds for 279,000 austere sets of individual clothing and equipment, and other equipment for training ranging from M-16 rifles to mortar carriers and howitzers. Funds are also included for maintenance of mobilization training equipment and for architectural work needed to prepare training sites for emergency construction. Additionally, the Army Mobilization and Operations Planning System has made significant progress in improving mobilization planning. A concept for CONUS-based replacement centers, located at major training centers, has been developed to process replacements to a theater of operations more efficiently.

To evaluate the material transportation system, the Army has developed a series of programs to ensure DoD requirements can be met during mobilization. Initiatives include continuing evaluation of ports, highways, railroads, and pipelines to optimize deployment.

capability. Other significant achievements include establishing a mobilization organization for water supply, improving installation outloading/receiving capability, planning the receipt and onward movement of conventional ammunition, and improving wartime asset redistribution.

We plan mobilization-related initiatives to provide a national training center for Army and Marine Corps units to practice vessel outloading of unit equipment. Units will be trained at the Sealift National Training Center to reduce deployment time by compressing embarkation time on roll-on/roll-off ships.

The Army is developing plans to place aviation maintenance equipment in POMCUS stocks to enable one aviation repair depot to deploy to NATO in the early stages of mobilization. This depot would straddle the aviation pipeline to Europe, acting as a focal point for deploying and evacuating aircraft, and providing back-up aviation maintenance to the Army in Europe.

c. Resources

We have included the following funds in this year's budget to improve the Army's ability to expand its training base during mobilization.

TABLE III.N.1

Funds to Improve Army Mobilization Base Capacity (\$ Millions)

<u>FY 1983</u>	<u>FY 1984</u>	<u>FY 1985</u>	<u>FY 1986</u>	<u>FY 1987</u>
23.7	23.7	138.3	88.4	5.5

6. Conclusion

During the past year, we have made significant progress in our ability to mobilize rapidly. This progress is encouraging, but much work remains to be accomplished, particularly in interagency planning and preparedness. I expect the Military Mobilization Working Group to supply the needed, high-level focus to this effort. We will continue to improve and refine our mobilization plans, procedures, and systems as we evaluate these improvements in mobilization exercises.

O. Industrial Responsiveness

1. Introduction

The proclamation by the President to revitalize the U.S. economy and strengthen our national defense has breathed new life into a vital element of our national security by surfacing, for public scrutiny, the serious decline in our economic base and our leadership in the industrialized world. This vital element is our industrial base and the historic dependence we have placed on it in projecting our national strength. Our deficiencies in this area are clearly recognized and a consensus exists on the need for aggressive programs to restore the health and vitality of the American economy and to ensure the adequacy of our military strength for the 1980s and beyond.

Congress documented its concerns last year in a special report entitled: "The Ailing Defense Industrial Base: Unready for Crisis," prepared by the House Committee on Armed Services, which, as part of numerous findings, concluded that "the defense industrial base has deteriorated and is in danger of further deterioration." Although some of the problems pointed out in the Committee Report (bottle-necks and schedule delays) have abated, problems which remain in the defense industry are, in fact, a sub-set of our overall economic industrial problems. Our approach to the defense industrial base problems is, therefore, consistent with President Reagan's overall program to revitalize our economy and strengthen our national defense. We are concerned that:

- We are becoming increasingly dependent on imports of many scarce natural resources such as cobalt and rutile that are vital for defense. Some of our laws restrict us from sampling or exploring to determine if sources of scarce natural resources are available on U.S. public lands.
- Our vital strategic and critical material stockpiles are out of balance--many materials are excess to requirements and several are below inventory goals.
- Productivity in defense-supporting industries is too low. The United States ranks last in the rate of increase in productivity behind all other major industrialized nations, although total U.S. productivity per worker is still the highest in the world.
- Compared to other business, defense contracting is viewed by business as less stable, less predictable, and thus less attractive than commercial business.

- There are potential shortages of some types of engineers, technicians, and skilled blue collar workers.
- Defense industry has limited surge or rapid mobilization capability below the prime contractor level.
- Supply constraints exist in some critical areas, e.g., forgings, large castings, bearings, etc.

2. Program Description and Status

In response to the decline in our industrial base we have developed a Department of Defense Action Plan for Improvement of Industrial Responsiveness. The action plan is structured to identify the problems, define our objectives, and set forth our ongoing and planned actions in three major areas. These areas include the National Resource Base, Defense Acquisition Process, and the Industrial Preparedness Program. It is not intended to replace or to substitute for Administration programs aimed at improving the American economy generally, nor is it meant to usurp private initiative in this area. National Resource Base objectives are to overcome near-term materials shortages and leadtime problems, improve self-sufficiency in critical raw materials, obtain sufficient skilled labor to meet the needs of industry, and improve industrial productivity.

Defense Acquisition Process objectives (discussed in detail in Part III.J) are:

- to reduce acquisition cost;
- to reduce acquisition time;
- to increase program stability; and
- to ensure coordination of acquisition systems decisions with industrial preparedness and planning, programming, and budgeting system (PPBS) decisions.

Industrial Preparedness objectives are:

- to create an organizational environment conducive to industrial preparedness planning and mobilization; and
- to maintain a defense industrial base which is responsive to surge and mobilization needs.

The following represent a few of the specific steps we have taken to enhance our ability to accomplish these objectives:

a. The Acquisition Process

In April 1981, we concluded an acquisition process study and are now aggressively implementing 32 recommendations and decisions for improvement of the acquisition process. This is referred to as the "DoD Acquisition Improvement Program;" the status and detailed description is contained in Part III.J.

b. The Defense Production Act

The Defense Production Act is the sole authority for programs specifically directed toward maintaining the national defense industrial base. For 30 years, we have relied on this Act to maintain ongoing defense contracting and preparedness programs to support our national security objectives. Using the Title I authorities provided, we have reduced the adverse impact on our program schedules that occur during periodic fluctuations of the business cycle and in periods of material shortage. Our objective is to maintain stable weapon system delivery schedules.

c. National Defense Stockpile

The purpose of the stockpile is to ensure that our Government will have the necessary raw materials available to support military requirements and the basic civilian economy during war.

(1) Critical Raw Material Status

Under the National Strategic and Critical Materials Policy, R&D Act of 1980 (P.L. 96-479), we are assessing our raw materials situation. In March 1981, the President approved the first National Defense Stockpile purchase program in more than 20 years, beginning with \$100 million of purchases of which \$70 million is for cobalt. At the same time, the President indicated additional purchases would be made in the future as revenues from sales of excess materials accumulated in the stockpile fund.

(2) Foreign Dependence

Although we are dependent upon foreign sources for many raw materials, we are also experiencing a significant decrease in domestic capabilities to process and manufacture industrial products. We are exploring methods for restoring a domestic industrial capability sufficient to maintain national security.

d. Manufacturing Technology Program

The Manufacturing Technology Program is a broad-based program designed to improve the productivity and responsiveness of the U.S. industrial base. Investments made by this predominately procurement funded program have resulted in factory floor applications of productivity enhancing technology and will continue to receive priority emphasis.

e. Industrial Base Guidance and Funding

A key segment of our overall effort has involved the development of new defense guidance and funding support. The focus of guidance is on reducing lead-time and improving productivity by:

- isolating key bottlenecks and constraints that are causing long procurement lead-times;
- identifying resource requirements to reduce and/or eliminate bottlenecks; and
- examining various industrial preparedness funding alternatives for prioritizing the allocation of resources.

The Services are taking steps to improve all areas of the Industrial Preparedness Program. A comparison of the current Five-Year Defense Program with the previous Five-Year Defense Program, reveals a 43 percent increase.

f. Government/Industry Relations

An explicit part of our overall approach to revitalizing our industrial base is to coordinate our efforts more closely with industry. We in the public sector have no chance of improving the acquisition system without working side-by-side with the private sector. For this reason we have placed a high priority on improved relations between the Defense Department and its contractors. In this regard, we are scheduling meetings with industry leaders and officials of state and local governments to insure clear understanding of the need to ~~revitalize our industry~~; to publicize efforts taken by DoD to achieve this goal; to obtain industry reaction to DoD efforts; and to solicit industry assistance.

In August, the Deputy Secretary of Defense hosted a special meeting of the U.S. Conference of Mayors. Mayors of 13 major cities attended the meeting which was keyed to establishing a critical communication link with the cities as part of this Administration's effort to revitalize American industry.

To assist us in communicating potential Defense requirements to industry, we have developed a Defense Economic Impact Modeling System to provide analysis for industry's use in planning to meet the demands of the Defense acquisition programs.

3. Conclusions

During the past year there have been substantial changes in philosophy and policy with respect to acquisition of defense items; the burden now is to assure that these changes are implemented to the fullest extent.

We are concerned about the defense industry--especially with respect to the fundamental strength of the base--its productivity, the quality and reliability of its products, lead-time, diminishing manufacturing sources, and its ability to respond to normal demands as well as surge and protracted emergency requirements. We believe, with the initiatives being pursued and the progress made so far, that U.S. industry can produce the planned increases in defense spending over the next few years. We must, however, continue to closely monitor the areas which have adversely affected production and meet those challenges as they arise. We believe that with prudent attention, and joint commitment by both government and industry, we will succeed.

P. MANAGEMENT

1. Introduction

The first management priority of the Department of Defense is to maintain modern, effective, and balanced military forces that are able to deter and, if deterrence fails, to defeat any attacks on the United States and its vital interests. Our second priority is to accomplish our assigned missions as efficiently as we can. Accordingly, organization and management reform are a matter of continuing priority within the Department. We have pursued and will continue to press management improvement action that will enable us to strengthen our military capabilities at the lowest possible cost by making our operations more efficient, thereby getting more for each dollar we spend.

The Defense Management System which we have initiated is designed to encompass five important objectives:

- it will state the national military strategy necessary to support our foreign policy and provide security for our people,
- it will help us achieve the integrated and balanced military forces determined to be necessary to accomplish our stated foreign and national security policies,
- it will help ensure that we are ready to deter aggression or to succeed if the use of military force is required,
- it will provide the framework necessary to manage DoD resources efficiently and to insure successful mission accomplishment consistent with national resource limitations, and
- it will provide information to DoD management to insure that the role of military power is properly considered in the formulation of national objectives.

2. Major Management Systems Improvements

During this past year, we have acted to improve major management activities which we think will substantially improve our ability to manage the Department's programs and resources more efficiently. These initiatives include: major improvements to the Planning, Programming and Budgeting System (PPBS); a complete overhaul and streamlining of the defense acquisition process; strengthening our review and oversight system which will be the responsibility of the new Assistant to the Secretary of Defense (Review and Oversight); and establishment of the DoD Council on Integrity and Management Improvement. Other actions include continuing organizational improvements; improving program efficiencies; and implementing cost reduction actions.

Planning, Programming, and
Budgeting System (PPBS)

The PPBS was originally designed to provide an integrated, participatory decision process for managing DoD. However, within recent years, PPBS has evidenced the need for change to insure its responsiveness to changing national security requirements and the internal management imperatives of the Department. By 1981:

- the system had grown top heavy and congested with paperwork and detail;
- planning was incompatible with fiscal realities;
- there was an overemphasis on programming to the exclusion of strategic planning;
- a proliferation of structures and data bases were working against the smooth flow of the PPBS cycle;
- professional military advice on program and budget decisions was not well integrated into the PPB System; and
- the system was not meeting objectives in the most effective and economical manner.

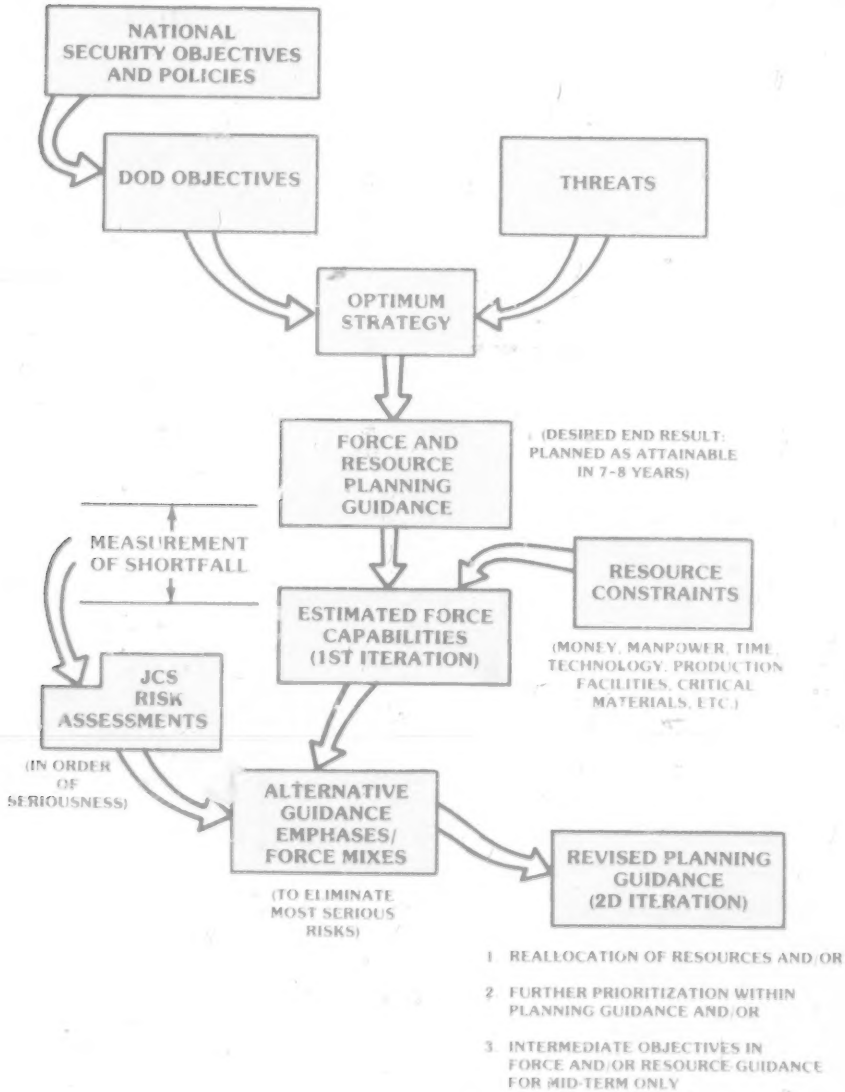
We initiated a comprehensive review of PPBS to improve, on the one hand, the match between our policies, strategy, and military capabilities; and, on the other, to streamline our decisionmaking process. Following careful study, both within and outside the Department, we have initiated a revised system, which incorporates the following features:

(1) A revitalized planning process. The most distinctive feature of the new DoD planning process (Chart III.P.1) is an increased emphasis on front-end planning through which ensuing programs and budgets are guided toward the goals and objectives of our strategic plans. The strengthened planning process is led by the Under Secretary of Defense for Policy. The new process enhances the participation of top OSD staff managers and Service line-managers, and ensures that the military advice of the Joint Chiefs of Staff and the Commanders of the Unified and Specified Commands is brought to bear throughout the process.

(2) Streamlining the program review process. During FY 1981, we established a goal of reducing the documentation associated with program review by 50 percent. We have met and exceeded that goal. Experience this far demonstrates that the reduced documentation provides adequate information to accomplish the major priority and cross-Service reviews that we require. Budget documentation has also been reduced and Congressional committees

CHART III.P.1

(U) THE DEFENSE PLANNING PROCESS



have been asked to review the paperwork requirements they have imposed.

(3) The Secretary's Performance Review. In recognition of the need for closely monitoring program execution, we have established the Secretary's Performance Review. During the review, we focus senior leadership attention on the key problems, issues, and programs through a series of regularly scheduled top-level review sessions. These meetings emphasize measuring progress toward important defense objectives, identifying problems that need to be resolved, and determining ways that performance can be improved. Among the programs reviewed to date are the Army's manpower program, the Navy's sealift program, the TRIDENT submarine missile program, and the Air Forces's airlift, readiness and sustainability programs.

(4) Clarifying management responsibilities. We emphasize centralized control of executive policy development and decentralized policy execution. The Secretary, the Chairman of the Joint Chiefs of Staff, and the Service Secretaries now concentrate on major policy decisions. The Services have been made responsible for the development and execution of the day-to-day management of the resources under their control. The OSD staff provides the technical cross-Service and major mission analyses necessary to integrate the capabilities of the Services and to meet the objectives identified by the President and Congress.

(5) Participatory Management. We draw upon the complete resources of the Department to encourage the full exchange of ideas as we formulate policy and design programs. To this end, we have enlarged the Defense Resources Board (DRB), the principal governing body of the Department's program review process, to include the Service Secretaries, and when appropriate, the CINCs. At the same time, we have directed that only major issues be raised before the DRB. Lesser issues are decided outside the DRB forum by the Services and the Office of the Secretary of Defense.

Taken together, these modifications are helping us to implement the efficiencies and economies we are all seeking in defense spending.

b. Streamlining the Defense Acquisition Process

The basis of our acquisition philosophy is drawn from PPBS and is reflected in several key objectives:

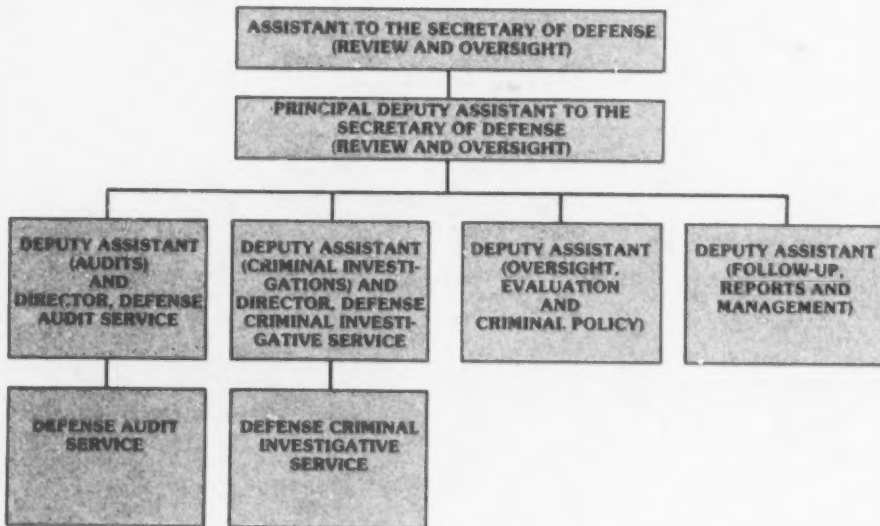
- to improve long-range planning so that the Services, the Congress, and the contractors will know as far in advance as possible the full scope of each program;
- to delegate responsibility, authority, and accountability to the program manager and to reverse the insidious tendency towards micro-management from above and from outside;

- to give more serious attention to the improvement of military capability by using time-tested systems;
- to achieve more economic production rates, which save money for us over the long run and make life more predictable, and thus defense business more attractive for our contractors and potential contractors. We must do this to restore a healthy, strong industrial base for military orders;
- to use realistic cost, budget, and funding figures so that both we and the Congress understand early what the total life-cycle costs of a program will be;
- to consider as a prime factor early in the decision process the combat readiness of a proposed weapon system once deployed, again recalling the primary objective: to be prepared to carry out our missions of deterrence and defense at any given moment; and
- to do all the things necessary to rebuild and maintain a strong, flexible industrial base, both for peacetime production and for wartime surge and mobilization.

We have initiated 32 specific actions to reduce acquisition costs, shorten acquisition lead-time, improve weapons support and readiness, and to refine the acquisition process. Overall responsibility for translating these actions into implementable direction, and for insuring that management has visibility of actions taken, has been assigned to the Under Secretary of Defense (Research and Engineering) (USD[R&E]). An implementation steering group composed of representatives from the three Military Departments and OSD staff offices provides guidance and advice to the USD(R&E). We will continue to build upon this effort in future months.

C. Review and Oversight

CHART III.P.2

**OFFICE OF THE ASSISTANT TO
THE SECRETARY OF DEFENSE
(REVIEW AND OVERSIGHT)**

There is continuing need to combat fraud, waste, abuse, and mismanagement in the Department of Defense through careful audit, inspection, and evaluation of programs and operations. Accordingly, we have strengthened our anti-fraud and waste efforts and audit follow-up systems by establishing a new position, the Assistant to the Secretary of Defense (Review & Oversight) (ATSD[R&O]) (Chart III.P.2). This official is responsible for coordinating all activities within the Department concerned with the elimination of fraud, waste, and mismanagement. In carrying out these responsibilities, the ATSD(R&O):

- develops policy, monitors, and evaluates program performance and provides guidance to all DoD activities on matters regarding criminal investigations programs;
- conducts criminal investigations, as required, in the Office of the Secretary of Defense, the Organization of the Joint Chiefs of Staff, and the Defense Agencies;
- monitors and evaluates the adherence of DoD auditors to internal audit, contract audit, and internal review policies and procedures; identifies areas where DoD components are not in compliance with DoD policies and programs, and recommends specific corrective action to the component head;
- develops policy, evaluates program performance, and monitors follow-up actions taken by all DoD Components in response to General Accounting Office audits, internal audits and internal review reports; and evaluates whether audit or review recommendations could, if implemented, improve the effectiveness and efficiency of DoD programs and operations;
- advises me of incidents involving fraud, waste, and mismanagement in DoD programs and operations that require my personal attention;
- exercises authority, direction, and control over the Defense Audit Service (DAS) and the Defense Criminal Investigative Service (DCIS); and
- operates the DoD Hotline for use as an information source in detecting fraud, waste, and mismanagement in DoD programs.

The ATSD(R&O) is working closely with the Service Audit Agencies, the Inspectors General, the Auditors General, the criminal investigation agencies, and the 16 civilian-agency Inspectors General. Through the use of these resources, the ATSD(R&O) has been and will continue to examine DoD programs and operations in the coming months. We expect these efforts to result in practical ways to improve management and reduce instances of fraud, waste, and abuse.

Within the past few months, we have focused significant attention on improving audit follow-up. We recently issued two directives on audit follow-up and began aggressive actions to resolve all disputed audit findings and recommendations within a six month period of the date of the final audit report. As of September 30, 1981, virtually all of the older findings and recommendations had been resolved throughout the DoD. We are implementing a computerized follow-up system to track General Accounting Office and Defense Audit Service recommendations to implementation. We are overseeing the development of compatible tracking and follow-up systems maintained by the Military Departments for their internal audits and reviews. We are also initiating a resolution, tracking and reporting system for the approximately 60,000 contract audit reports that are issued annually by the Defense Contract Audit Agency.

d. DoD Council on Integrity and Management Improvement

In an effort to expand the momentum of management improvement that was initiated with the announcement of the 32 initiatives to improve the acquisition process, we have established the DoD Council on Integrity and Management Improvement.

The objectives of the Council are to:

- explore all areas of management improvement which can be identified in the Department of Defense and to pursue their timely implementation;
- promulgate the results of review and oversight activities of the Department of Defense to assure that recommendations of the inspection, audit, and investigation activities of the Department to improve integrity, economy, and efficiency are recognized and implemented;
- act as a forum to exchange information on what is being done to improve Defense operations and share such information; and
- maintain a liaison with the President's Council on Integrity and Efficiency through the ATSD(R&O).

3. Organization of the Office of the Secretary of Defense

After careful study of the management structure, we have instituted a number of changes to improve the organizational responsiveness to current program priorities and management objectives. Chart III.P.3 displays the incorporation of these changes.

a. Legislative Affairs

DoD policies, programs, and budget priorities are undergoing a major revitalization and reorientation. Because the success of this effort hinges so substantially on establishing and maintaining positive and effective working relationships with Congress, we have upgraded the Assistant to the Secretary of Defense (Legislative Affairs) (ATSD[LA]) to Assistant Secretary of Defense (ASD) status. This action returned the position to the status it held prior to 1977. To provide the necessary ASD authorization, the Assistant Secretary of Defense (Program Analysis and Evaluation) (ASD[PA&E]) was redesignated as Director (PA&E). The functional responsibilities of the Director (PA&E) otherwise remain unchanged. The Director will continue to report directly to the Secretary and work closely with him on all program matters.

b. International Security Policy

In order to improve policy planning within DoD, coordination with other agencies, and the integration of defense policy and plans with overall national security objectives, the position of Assistant Secretary of Defense (International Security Policy) (ASD[ISP]) was established. To provide the necessary ASD authorization, the Assistant Secretary of Defense (Communications, Command, Control, and Intelligence) has been redesignated as a Deputy Under Secretary of Defense. He will report to the Under Secretary of Defense (Research and Engineering). The position's functional responsibilities remain unchanged.

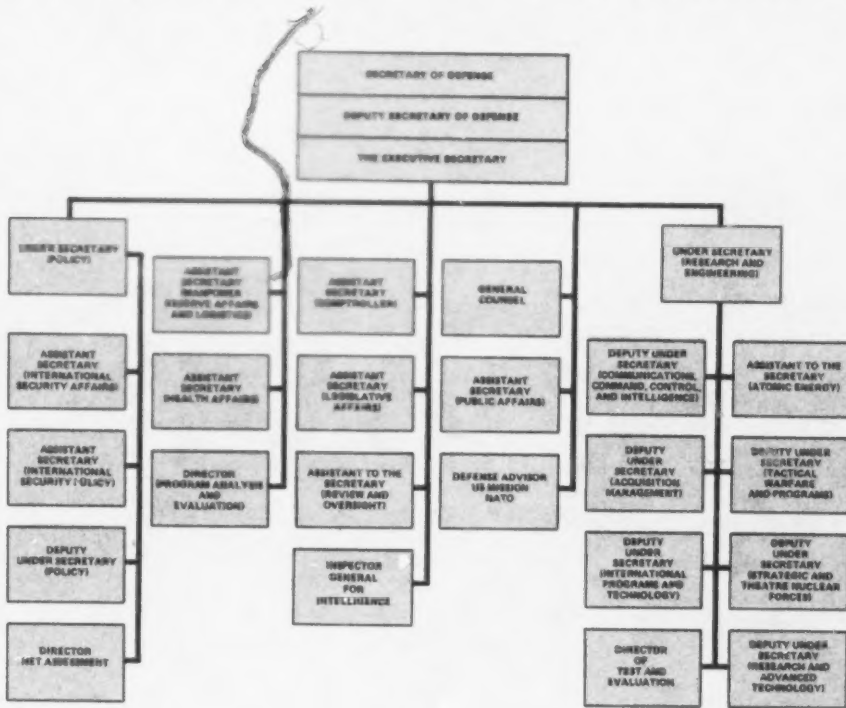
c. Manpower, Reserve Affairs, and Logistics

The Office of the Assistant Secretary of Defense (Manpower, Reserve Affairs, and Logistics) (ASD [MRA&L]) has been restructured to improve span of control and to promote organization coherence. The new structure encourages a more comprehensive, analytic policy focus on the major programs of the All Volunteer Force and on improving manpower and materiel readiness and sustainability. In addition, the organization changes are consistent with our philosophy of returning more authority and responsibility to the Service Secretaries. Our ability to engage in long-term planning and analysis in support of an expanded Defense program is thus enhanced. This action has reduced the number of Deputy Assistant Secretaries of Defense within the Office of the ASD (MRA&L) from nine to seven.

d. Restoration of Assistant Secretary Positions

We have asked the Congress to restore the five Assistant Secretary positions eliminated by a

CHART III.P.3

(U) OFFICE OF THE SECRETARY OF DEFENSE

reorganization order of the previous Administration. Although suited to the Defense policies of the time, this action has reduced the flexibility of the Department in adapting the Office of the Secretary of Defense and the Service Secretaries to changes in Defense priorities, policies, and program emphasis. During deliberations on the DoD proposal, the House Armed Services Committee decided to add a sixth position and designate it as the Assistant Secretary of Defense for Communications, Command, Control, and Intelligence (ASD[C³I]).

In addition to the ASD(C³I) position, current planning calls for using two Assistant Secretary of Defense positions to strengthen the Office of the Under Secretary of Defense (R&E). The position of Assistant Secretary of Defense for Development and Support will be established to provide increased management attention to the development of those military capabilities represented by deployed systems and equipment, and to focus on acquisition objectives to meet DoD needs, not solely Service needs. He will also serve as the Principal Deputy Under Secretary of Defense for Research and Engineering.

To insure the maintenance of a superior U.S. technology base vis-a-vis the USSR and to improve our approach in selecting the right technology programs to help achieve and maintain a qualitative lead in deployed systems, the position of Assistant Secretary of Defense for Research and Technology will be established. He will also serve as the Director, Defense Advanced Research Projects Agency (DARPA) to improve the integration of DARPA programs with Service programs.

Three of the requested Assistant Secretary positions will be used to streamline the organizational structure and enhance management of the Service Secretariats.

Approval of the legislation required to implement the above changes would bring the number of DoD executive level positions to 36. However, the FY 1982 DoD Appropriations Bill limits the use of DoD appropriations to fund 35 executive level positions, thus leaving a shortfall of one in funding for all six of the Assistant Secretary positions discussed above. We are hopeful for the favorable reconciliation of this problem by the Congress.

4. Program Improvements

a. Communications, Command, Control, and Intelligence (C³I)

In an effort to improve the integration of C³I with the weapon systems that they support, several management initiatives have been undertaken by the USD(R&E). First, staff members assigned to DUSD(C³I) have been attached to the two warfare directorates in OUSDRE (i.e., DUSD (Strategic and Intermediate Range Nuclear Forces) and DUSD (Tactical Warfare Programs). These staff members function as C³I systems architects who assist the resident deputies by integrating C³I concepts, technology, and procedures into the design and acquisition of weapons

systems. Second, within DUSD (C³I), an Assistant Deputy Under Secretary of Defense for Systems Integration (ADUSD [SI]) has been established to take a total systems perspective of the C³I--weapon system. That office will insure that mission area plans and system architectures are balanced and consistent with the needs of all users and oversee the implementation of investment strategies in the PPBS cycle.

New initiatives are being pursued to realize further program improvements. As examples, the rate of acquisition of previously developed communications equipment is being accelerated, e.g., the Army Tactical Communications Program and manpower requirements are being reduced through automation and improvements in equipment reliability and maintainability, e.g., the base and support communications program. In addition, in the area of electronic warfare and C³ countermeasures, efforts are underway to procure sufficient quantities of equipment at economical rates to equip the tactical forces, e.g., self-protection jammers, and to obtain a balanced mix of countermeasures capabilities.

b. Security Assistance

As the responsible agency within DoD for security assistance and arms transfer management matters, the Defense Security Assistance Agency (DSAA) is pursuing several new initiatives for improving its ability to manage programs in these vital areas. Of particular importance is the establishment of the Advanced Procurement Planning System for Security Assistance (APPSSA) which is comprised of two essential components: the Special Defense Acquisition Fund (SDAF) and the Priority Defense Items Information System (PDIIS). The SDAF is a special account for procuring military equipment in anticipation of the requirements of allied and friendly nations. Among other things, its establishment will promote U.S. force readiness by minimizing the need for diversions from production and the drawdown of U.S. Service stocks. The PDIIS will provide information on sales, potential sales, production schedules, and logistics requirements for priority defense items. By allowing us to anticipate foreign military sales requests, the PDIIS and SDAF will facilitate the integration of procurement for DoD requirements with that for security assistance, thus cutting costs and lead times and resulting in smoother production runs.

c. Health and Medical

Health care management initiatives undertaken during the past year include improvements in the DoD wartime medical posture, including the Civilian-Military Contingency Hospital System (CMCHS) as explained previously in Part III.L., and further development of the Defense Enrollment/Eligibility Reporting System (DEERS), the Uniform Chart of Accounts, and the Uniform Staffing Methodology to more accurately measure and allocate health resources.

DEERS is a major effort currently underway to improve the management of DoD health resources and to help reduce waste, fraud, and abuse of Uniformed Services benefits. Through the compilation of demographic data on the

beneficiary population, DEERS will provide a mechanism for verifying eligibility for benefits. Intensive enrollment of the beneficiary population is ongoing with the CONUS data base expected to be completed by FY 1982 and worldwide by FY 1983. Over six million people have been enrolled, more than half of the projected total.

(2) Uniform Chart of Accounts(UCA)/Uniform Staffing Methodology (USM). These related systems offer further evidence of our continuing effort to improve the management and allocation of our health care resources. The UCA provides a common measurement and reporting standard through the use of uniform cost and work centers. The USM applies similar uniformity to manpower allocation procedures. When fully operational, both systems will provide managers with productivity, cost, and workload data needed to effectively allocate medical resources.

d. Depot Maintenance Management

We have directed the establishment of a DoD Aeronautical Depot Maintenance Task Force to oversee our continuing efforts towards improving the capability and efficiency of both organic and contractual depot maintenance for aeronautical systems. The task force will assure that individual and joint service plans, and their implementation, adequately and promptly address mobilization requirements and capabilities, modernization of plant and equipment, full use of interservice capabilities, establishment of common management information systems, elimination of excess depot capacity, and an appropriate balance between organic and contract sources of repair.

e. Supply Management

In supply management, we are transferring wholesale inventory management responsibility for 200,000 consumable items from the separate Military Departments to the Defense Logistics Agency, where they will be centrally managed. This transfer is expected to enhance the management of consumable items and generate substantial savings. Further savings will be realized if follow-on reviews indicate that additional items should be similarly transferred.

f. Consolidation of Land and Ocean Transportation

We have approved actions which will culminate in the consolidation of the Military Traffic Management Command (MTMC) and the Military Sealift Command (MSC) into a single organization. This action represents a major opportunity for reducing logistics support costs while improving the wartime readiness of our deployment and transportation management systems.

g. Consolidation of Personal Property Shipping

We have approved the consolidation of 23 Personal Property Shipping Offices throughout the United States. This action will provide better service in shipping military members' personal property at reduced costs.

h. Civil Service Reform Implementation

We will continue to press our efforts to make full use of the opportunities afforded by the Civil Service Reform Act to improve the efficiency of Defense operations. The "pay for performance" features built into the Senior Executive Service and Merit Pay systems should stimulate management improvements. New performance appraisal systems for non-supervisory employees are now fully implemented and should contribute through better employee understanding of job requirements and less burdensome procedures for dealing with non-performers.

Implementation of the labor relations provisions of the Reform Act has proceeded without major incident and relationships with the labor organizations that represent nearly two-thirds of the Defense civilian workforce are generally constructive. We are concerned, however, about the rising costs of the program, particularly those stemming from Reform Act provisions dealing with the negotiation process and with the investigation and litigation of unfair labor practice allegations. We will continue to seek means of controlling and ameliorating this problem.

1. DoD Regulatory Reform

Several new initiatives have been implemented which broaden DoD's participation in the Government's overall regulatory reform activities including:

- a joint DoD/OMB review of the Department's Regulatory Agenda prior to publication for public comment; and
- participation in the Vice President's program for reviewing existing regulations which have significant impact upon the public.

In addition, the Department is continuing its efforts to implement the requirements of Public Law 96-511, "The Paperwork Reduction Act of 1980," which was enacted to control and improve the management of information resources throughout the Executive Branch of Government. The Department of Defense has designated the Assistant Secretary of Defense (Comptroller) to coordinate all activities required under the Act and is establishing an Information Resources Management Council (IRMC) which will be responsible for accomplishing the major policy objectives of the program; developing a DoD-wide series of Implementation Plans; and preparing a series of Triennial Review Schedules by each of the major components.

j. Credit Management and Debt Collection

We have undertaken an aggressive program to strengthen debt collection practices. We believe that the initiatives now in progress will produce significant

improvements. We have highlighted within DoD the high level interest in credit management of the President and the Congress and we have designated the Assistant Secretary of Defense (Comptroller) as the DoD official responsible for credit management in the Department. The Military Departments and Defense Agencies have also designated officials to share credit management responsibility. We are pushing ahead to develop:

- uniform definitions and procedures for identifying, recording, aging, reporting, and writing off receivables;
- points of diminishing return criteria; and
- procedures for charging interest, using collection agencies, and reporting delinquents to credit bureaus.

Our detailed plan for implementing this program has been submitted to OMB, the government-wide monitor of this program.

k. Continuing Accounting Systems Approval

The Budget and Accounting Act of 1950 requires the submission of agency accounting systems to the U.S. Comptroller General for his approval.

There are currently 105 systems on the DoD inventory of accounting systems of which 80 have been approved by the Comptroller General. Of the 25 remaining systems, 12 are under long-term development; i.e., the design completion date is more than two years away.

The Comptroller General in his annual report to the Congress on the "Status, Progress, and Problems In Federal Agency Accounting During Fiscal 1980" noted that the Department of Defense had made good progress in obtaining approval of its accounting systems. In 1981, we have seven accounting systems and three major components of the Army's Program Budget and Accounting System approved. We are continuing to push ahead with the approval program and plan to have six additional systems approved by the end of FY 1982.

5. Efficiencies and Economies

In previous announcements and in testimony before the Congress, we have indicated that the additions requested for vital improvements in our Defense posture would be partially offset by savings resulting from improvements in our operations. In fact, last March we projected savings in the six fiscal years 1981-1986, totaling \$31 billion. More than \$17 billion was attributed to civilian and retirement pay restraints and changes in economic assumptions relative to policies of the previous Administration. This pay adjustment figure has now risen to over \$23 billion with another \$7 billion to be saved in FY 1987.

This difference is due to the somewhat lower pay raise assumptions than were previously forecast reflecting government-wide policy and new estimates of where the economy will take salary and wages. The balance of savings will come from implementing the many management improvements we have undertaken, which were addressed above.

Following is a summary of major categories in which savings and cost avoidances have been accomplished in FY 1981 and FY 1982 programs as a result of the transition to the present Administration. Also included is a projection of these savings extended to the program years through FY 1987.

	(\$Millions)		
	<u>FY 1981</u>	<u>FY 1982</u>	<u>Projected FY 1983-1987</u>
Acquisition:			
Eliminate/Reduce Marginal Systems	12	292	6,207
Multiyear Contracting	15	20	1,080
Economic Production Rates	29	472	2,279
Productivity Enhancements	-8	34	323
Other Acquisition Improvements	121	523	3,902
	<u>169</u>	<u>1,341</u>	<u>13,791</u>
Operation:			
Eliminate/Reduce Marginal Programs	37	206	939
Logistics Improvements	63	32	807
Base Support Efficiencies	-	51	302
Reduce Administrative Overhead	78	408	2,603
Increased Productivity	42	45	885
Other Operation Improvements	40	199	1,355
	<u>260</u>	<u>941</u>	<u>6,891</u>

These savings/cost avoidance represent what has already been accomplished or is programmed. By far the largest economy has been possible in the area of procurement efficiencies. The largest potential for even further economy seems also to be in this area, where much is dependent on spending more in order to save more through economies of scale. Through a multiyear contracting approach to several of our major weapon systems, we have identified procurement savings of nearly \$1.1 billion through FY 1987. Through restructuring of planned order quantities to the most economical rate, procurement savings on the order of \$2.3 billion will be realized. Further savings of \$1.4 billion are expected to result from restructuring, redefining and rescoping many programs to provide lower cost alternative programs. These and similar efforts will continue in order to meet even higher savings goals we have imposed on ourselves.

In the operations area, the greatest category of savings has been in the reduction of programs and activities contributing to the overhead expense of conducting business. A reduction in administrative overhead of \$2.6 billion is made up primarily from curtailments in administrative travel, audiovisual activities, and the use of consulting and management services contracts. Over \$.8 billion has been saved through management improvements in logistics activities such as the centralization of consumable items management, establishing a single manager for transportation, application of automated marking and reading symbology, travel management improvements and other similar logistics activities. Good progress is being made in identifying and consolidating base support functions on a geographical basis, rather than two or more bases in the same area maintaining separate base support organizations. Savings targets have been established and budgets and financial plans reduced over \$200 million. Increased productivity and efficiency measures, including better utilization of computer and ADP capabilities and changes in advertising and recruitment methods, will result in savings of more than \$800 million.

The Department is proceeding on a wide range of fronts to achieve the maximum economy and efficiency in the Defense programs. There is reason to be proud of progress made to this point but we recognize that more needs to be done, and are confident that this can be achieved.

6. Conclusion

We will continue to refine the management initiatives undertaken during the past year and explore new approaches to organization and management improvement that offer the potential for more effective performance of the defense mission and greater efficiency in the use of existing resources.

THE
DEFENSE
BUDGET

A. SUMMARY

The aggregate funding required to support the Defense program is presented below. Section B. of this Chapter places the funding data in historical context with charts showing Defense budget trends from FY 1965 to FY 1983. Price level assumptions and the out-year projections arising from those assumptions and program plans are presented in Sections C. and D. Real growth rates are tabled in Section E., and Section F. is devoted to an analysis of the FY 1981, FY 1982, and FY 1983 Budgets by program area. Care is taken throughout the chapter to show data adjusted for the impacts of inflation, so that real purchasing power can be compared across years. The final section portrays Defense in the context of the National economy.

TABLE IV.A.1

Department of Defense - Military Functions
(\$ Billions)

<u>Current Year Dollars</u>	<u>FY 1981</u>	<u>FY 1982</u>	<u>FY 1983</u>
Total Obligational Authority (TOA)	176.1	214.2	258.0
Budget Authority (BA)	178.4	214.1	257.5
Outlays	156.1	182.8	215.9
<u>Constant FY 1983 Dollars</u>			
Total Obligation Authority (TOA)	202.2	227.8	258.0
Budget Authority (BA)	204.8	227.6	257.5
Outlays	182.4	195.4	215.9

Budget Authority (BA) represents the legal authority to incur obligations, that is, the authority to hire personnel or enter into contracts involving expenditures of funds from the Treasury within a specified period of time. In most cases, budget authority is provided by appropriation, but there are some exceptions. For military functions, the exceptions are technical and relatively minor, and budget authority is virtually identical to the amount appropriated.

Total Obligational Authority (TOA) represents the value of the direct Defense program for each fiscal year, regardless of the method of financing, which could include balances available from prior years or resources available from sale of items from inventory. Budget authority, on the other hand, represents the value of annual new authority to incur obligations.

Outlays represent expenditures or net checks issued. Less than three-quarters of FY 1983 outlays will result from FY 1983 budget authority; the remainder will come from budget authority provided in FY 1982 and earlier years.

B. DEFENSE BUDGET TRENDS: FY 1965 TO FY 1983

CHART IV.B.1
**TOA AND OUTLAYS IN CURRENT YEAR DOLLARS
(\$ BILLIONS)**

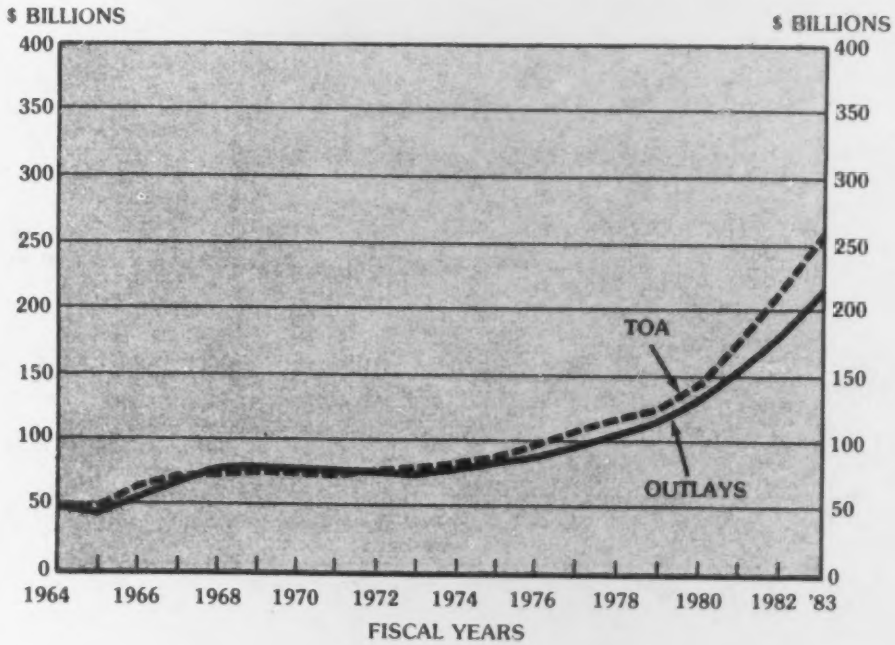
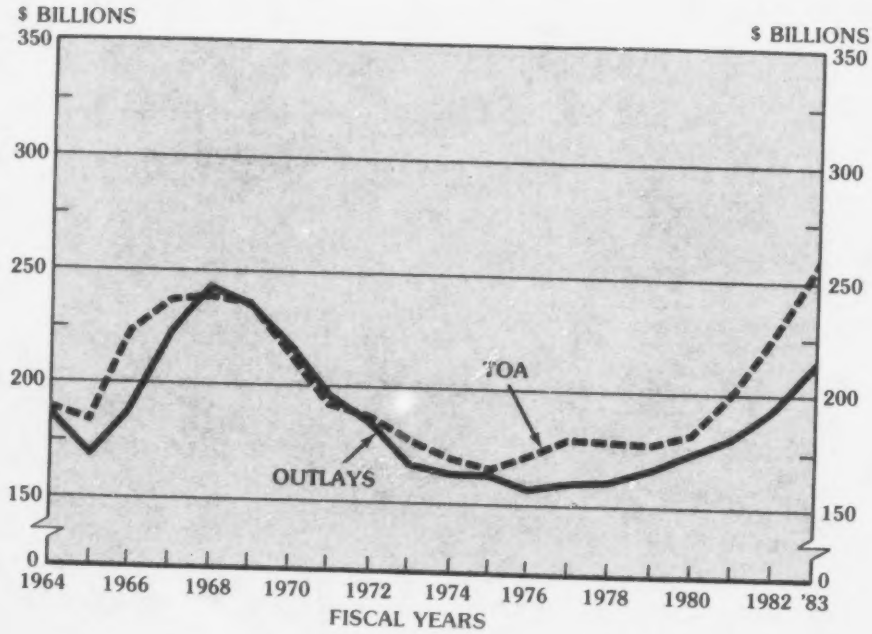


CHART IV.B.2
**TOA AND OUTLAYS IN CONSTANT
FY 1983 DOLLARS
(\$ BILLIONS)**



C. PRICE LEVEL ASSUMPTIONS

Planning for future expenditure levels requires estimates of the future course of inflation. We prepare those estimates on the basis of guidance furnished by the Office of Management and Budget (OMB). The OMB guidance establishes aggregate inflation rates for the purchase of goods and for services and the Consumer Price Index (CPI). The CPI is used for the retired pay accounts and planned comparability pay increases are used for the military and civilian pay accounts. We then calculate the TOA rates and the composite outlay rates shown in Table IV.C.1. on the basis of the OMB guidance and the expenditure profiles characteristic of each account, e.g., Missile Procurement, Air Force.

TABLE IV.C.1

Price and Pay Raise Percentage Increases

	FY 81- FY 82	FY 82- FY 83	FY 83- FY 84	FY 84- FY 85	FY 85- FY 86	FY 86- FY 87
Military Pay	14.3	8.0	7.6	5.5	5.0	5.0
Other Military Personnel Expenses	9.2	7.0	5.1	4.7	4.5	4.4
TOTAL, Military Personnel	12.8	7.6	7.1	5.4	4.9	4.8
Civil Service	4.8	5.0	5.0	5.0	5.0	5.0
Wage Board	4.8	5.0	4.0	4.0	4.0	5.0
Foreign National Direct Hire	8.0	8.0	8.0	8.0	8.0	8.0
Foreign National Indirect Hire	6.0	6.0	6.0	6.0	6.0	6.0
TOTAL, Civilian Payroll	5.5	5.1	4.9	4.8	4.8	5.0
Military Retired Pay	6.6	6.5	4.3	3.3	2.9	2.9
Pay Composite	9.3	6.7	5.9	4.8	4.5	4.5
Industry Purchases:						
Outlays:						
Fuel	1.2	2.1	5.5	5.8	5.7	5.6
Non-Fuel	9.4	7.5	6.0	5.9	5.3	5.3
TOA:						
Fuel	1.2	2.1	5.5	5.8	5.7	5.6
Non-Fuel	7.7	6.4	5.8	5.5	5.4	5.2
Composite Total:	8.7	6.9	5.9	5.5	5.1	5.0
Outlays	8.0	6.3	5.8	5.3	5.1	5.0
TOA						

D. OUT-YEAR PROJECTIONS

The Defense budget projections in Table IV.D.1. are based on the purchase inflation and pay raise assumptions outlined in Section C.

Table IV.D.1

DoD Military Functions
(\$ in Billions)

	<u>TOA</u>	<u>Outlays</u>
FY 1982	214.2	182.8
FY 1983	258.0	215.9
FY 1984	285.5	247.0
FY 1985	331.7	285.5
FY 1986	367.6	324.0
FY 1987	400.8	356.0

E. Real Growth

By real growth we mean the positive or negative change after the effects of inflation are removed. Adjustments for inflation are made using indices constructed from actual or projected inflation rates such as those in Table IV.C.1. Table IV.E.1. presents the year-to-year real growth percentages for the period FY 1966 to FY 1987.

Table IV.E.1

Defense Real Growth Percentages

<u>FY</u>	<u>TOA</u>	<u>Outlays</u>	<u>FY</u>	<u>TOA</u>	<u>Outlays</u>
1966	21.7	11.2	1977	4.7	1.9
1967	6.5	17.8	1978	-0.3	0.5
1968	0.1	8.9	1979	-0.7	3.9
1969	-1.2	-2.8	1980	2.5	3.8
1970	-9.2	-7.9	1981	10.9	4.1
1971	-9.7	-9.3	1982	12.7	7.7
1972	-3.0	-6.4	1983	13.2	10.5
1973	-5.2	-9.2	1984	4.6	8.0
1974	-4.4	-2.0	1985	10.4	9.6
1975	-2.4	-0.1	1986	5.4	8.0
1976	3.7	-3.5	1987	3.8	4.6

F. ANALYSIS BY PROGRAM AREA

The budget is disaggregated by the major force programs in Tables IV.F.1. and IV.F.2. and by appropriation category in Tables IV.F.3. and IV.F.4. The second table of each pair (IV.F.2. and IV.F.4.) is in constant FY 1983 dollars.

TABLE IV.F.1.

DoD Budget Summary by Major Force Program
 (TOA in Billions of Current Year Dollars)

<u>Program</u>	<u>Total Obligational Authority</u>		
	<u>FY 1981</u>	<u>FY 1982</u>	<u>FY 1983</u>
Strategic Forces	12.7	16.2	23.1
General Purpose Forces	68.3	88.0	106.5
Intelligence & Communications	11.2	14.0	18.0
Airlift & Sealift	2.9	4.0	4.4
Guard & Reserve Forces	9.9	11.6	14.3
Research & Development	14.2	16.9	20.1
Central Supply & Maintenance	17.6	19.2	22.2
Training, Medical, Other General			
Personnel Activities	35.0	39.8	44.2
Administration & Associated			
Activities	3.4	3.6	4.3
Support of Other Nations			
[Excluding Military Assistance			
Programs (MAP)]	.9	1.0	.9
TOTAL	176.1	214.2	258.0

TABLE IV.F.2.

DoD Budget Summary by Major Force Program
 (TOA in Billions of Constant FY 1983 Dollars)

<u>Program</u>	<u>Total Obligational Authority</u>		
	<u>FY 1981</u>	<u>FY 1982</u>	<u>FY 1983</u>
Strategic Forces	14.6	17.2	23.1
General Purpose Forces	78.9	93.8	106.5
Intelligence & Communications	12.8	14.8	18.0
Airlift & Sealift	3.4	4.3	4.4
Guard & Reserve Forces	11.4	12.3	14.3
Research & Development	16.2	17.9	20.1
Central Supply & Maintenance	19.6	20.3	22.2
Training, Medical, Other General			
Personnel Activities	40.4	42.4	44.2
Administration & Associated			
Activities	3.8	3.8	4.3
Support of Other Nations			
[Excluding Military Assistance			
Programs (MAP)]	1.0	1.1	.9
TOTAL	202.2	227.8	258.0

TABLE IV.F.3.

DoD Budget Summary by Appropriation Category
 (TOA in Billions of Current Year Dollars)

<u>Appropriation Title</u>	<u>Total Obligational Authority</u>		
	<u>FY 1981</u>	<u>FY 1982</u>	<u>FY 1983</u>
Military Personnel	36.7	43.0	47.9
Retired Pay	13.7	15.0	16.5
Operation & Maintenance	55.2	63.0	70.4
Procurement	47.8	65.4	89.6
RDT&E	16.6	20.0	24.3
Military Construction	3.4	5.1	5.4
Family Housing	2.0	2.3	2.8
Revolving & Management Funds	.5	.5	.9
TOTAL	176.1	214.2	258.0

TABLE IV.F.4

DoD Budget Summary by Appropriation Category
 (TOA in Billions of Constant FY 1983 Dollars)

<u>Appropriation Title</u>	<u>Total Obligational Authority</u>		
	<u>FY 1981</u>	<u>FY 1982</u>	<u>FY 1983</u>
Military Personnel	44.6	46.3	47.9
Retired Pay	15.6	16.0	16.5
Operation & Maintenance	61.5	66.3	70.4
Procurement	54.8	69.8	89.6
RDT&E	18.9	21.2	24.3
Military Construction	3.8	5.3	5.4
Family Housing	2.3	2.4	2.8
Revolving & Management Funds	.6	.5	.9
TOTAL	202.2	227.8	258.0

(NOTE: Totals may not add due to rounding.)

G. DEFENSE AND THE AGGREGATE ECONOMY

Table IV.G.1. presents Defense outlays as percentages of various economic aggregates such as GNP and public employment. The trend is clear in the data of the table--the Nation has devoted a continually declining portion of its resources to defense.

TABLE IV.G.1
Defense Shares of Economic and Budgetary Aggregates

	DoD as a Percentage of:			DoD as a Percentage of Public Employment			DoD as a Percentage of National Labor Force			National Income Accounts		
	Federal			Federal, State & Local			Direct Hire (DoD)			Percentage of Total Purchases		
	Budget	GNP	Net Public Spending	Federal	Federal	Local		Incl. Industry		National Defense	Total Federal	State & Local
FY 64	41.7	8.0	27.8	72.1	30.6		5.2	8.2	8.1	10.6	10.1	
FY 65	38.7	7.0	25.2	71.3	29.3		5.0	7.8	7.3	9.8	10.3	
FY 66	40.2	7.5	26.4	73.0	30.6		5.6	9.0	7.5	10.1	10.4	
FY 67	42.6	8.7	28.5	74.1	31.5		6.0	10.0	8.6	11.0	11.0	
FY 68	43.2	9.3	29.4	74.0	31.3		6.1	10.0	9.0	11.4	11.4	
FY 69	42.1	8.6	27.7	73.2	30.1		5.9	9.4	8.4	10.8	11.7	
FY 70	39.2	8.0	25.4	72.3	27.7		5.3	8.1	7.8	10.1	12.1	
FY 71	35.2	7.3	22.3	68.3	24.5		4.6	7.0	7.1	9.3	12.8	
FY 72	32.4	6.7	20.6	66.0	21.9		3.9	6.2	6.5	9.1	12.9	
FY 73	29.6	5.9	18.9	65.0	20.7		3.7	5.8	5.9	8.2	12.9	
FY 74	28.8	5.7	18.2	63.8	19.7		3.5	5.5	5.5	7.7	13.1	
FY 75	26.0	5.8	16.7	62.9	18.7		3.4	5.3	5.5	8.1	14.0	
FY 76	24.0	5.4	15.6	62.5	18.1		3.3	5.0	5.3	7.8	13.8	
FY 77	23.7	5.2	15.7	62.5	17.6		3.2	5.0	5.0	7.6	13.3	
FY 78	22.9	5.0	15.4	61.9	17.3		3.1	4.8	4.7	7.3	13.3	
FY 79	23.3	5.0	15.6	61.0	16.8		2.9	4.7	4.6	7.0	13.1	
FY 80	22.9	5.2	15.9	61.3	16.7		2.8	4.8	4.9	7.4	13.1	
FY 81	23.8	5.5	16.6	61.7	16.8		2.8	5.0	5.2	7.7	13.2	
FY 82	25.2	5.9	18.1	61.8	16.9		2.8	5.2	5.2	7.7	13.3	

APPENDIX A

TABLE 1
Department of Defense
Financial Summary
(In Millions of Dollars)

	<u>FY 1972</u>	<u>FY 1976</u>	<u>FY 1980</u>	<u>FY 1981</u>	<u>FY 1982</u>	<u>FY 1983</u>
<u>Summary by Budget Title</u>						
Military Personnel	23,147	25,430	31,065	36,746	43,005	47,928
Retired Pay	3,889	7,326	11,920	13,724	15,036	16,511
Operation and Maintenance	21,242	28,848	46,605	55,245	62,990	70,434
Procurement	18,526	21,033	35,309	47,768	65,362	89,587
Research, Development, Test, & Evaluation	7,584	9,520	13,494	16,634	20,044	24,349
Special Foreign Currency Program	12	3	7	3	3	4
Military Construction	1,262	2,147	2,259	3,422	5,061	5,447
Family Housing & Homeowners Asst. Prog.	839	1,258	1,552	2,028	2,278	2,814
Revolving & Management Funds	-	135	-	525	456	910
Total-Direct Program (TOA)	76,502	95,699	142,211	176,094	214,235	257,983
<u>Summary by Program</u>						
Strategic Forces	7,158	7,155	11,116	12,647	16,174	23,099
General Purpose Forces	25,518	32,851	52,394	68,269	87,976	106,488
Intelligence and Communications	5,451	6,671	9,120	11,207	13,983	17,988
Airlift and Sealift	1,114	1,262	2,121	2,930	4,036	4,352
Guard and Reserve Forces	3,255	5,374	7,879	9,922	11,560	14,345
Research and Development	5,756	8,645	11,794	14,195	16,903	20,147
Central Supply and Maintenance	8,663	9,714	15,314	17,552	19,232	22,187
Training, Medical, Other Gen. Pers. Activ.	15,198	21,502	29,301	35,000	39,755	44,235
Administration and Assoc. Activities	1,737	2,260	2,531	3,357	3,618	4,314
Support of Other Nations	2,652	264	641	915	995	852
Total-Direct Program (TOA)	76,502	95,699	142,211	176,094	214,235	257,983

TABLE 1 (Cont'd)
Department of Defense
Financial Summary
(In Millions of Dollars)

Summary by Component	<u>FY 1972</u>	<u>FY 1976</u>	<u>FY 1980</u>	<u>FY 1981</u>	<u>FY 1982</u>	<u>FY 1983</u>
Department of the Army	22,094	23,759	34,567	42,244	53,012	61,199
Department of the Navy	24,041	31,360	47,084	57,468	69,665	88,559
Department of the Air Force	23,834	28,432	41,690	52,425	65,757	78,614
Defense Agencies/OSD/JCS	1,745	3,487	5,268	6,763	7,961	9,731
Defense-wide	<u>4,783</u>	<u>8,661</u>	<u>13,603</u>	<u>16,194</u>	<u>17,840</u>	<u>19,880</u>
Total-Direct Program (TOA)	76,502	95,699	142,211	176,094	214,235	257,983
Financing Adjustments	-1,496	-288	412	2,529	92	-526
Budget Authority (BA)	75,006	95,508	142,621	178,353	214,327	257,457
Outlays	75,076	87,891	132,840	156,096	182,800	215,900

Note: In the FY 1982 and FY 1983 columns, amounts for military and civilian pay increases, military retired pay and proposed legislation are distributed. Details may not add to the totals due to rounding.

DEPARTMENT OF DEFENSE BUDGET DEFENSE BUDGET TOTALS

(\$ BILLIONS)

<u>CURRENT DOLLARS</u>	<u>FY 1981 ACTUAL</u>	<u>FY 1982 ESTIMATE</u>	<u>FY 1983 ESTIMATE</u>	<u>INCREASE FY 1982-1983</u>
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TOTAL OBLIGATIONAL
AUTHORITY (TOA)

176.1	214.2	258.0	43.7
-------	-------	-------	------

BUDGET AUTHORITY (BA)

178.4	214.1	257.5	43.4
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OUTLAYS

156.1	182.8	215.9	33.1
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CONSTANT FY 1983 DOLLARS

TOTAL OBLIGATIONAL
AUTHORITY (TOA)

202.2	227.8	258.0	30.2
-------	-------	-------	------

BUDGET AUTHORITY (BA)

204.8	227.6	257.5	29.8
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OUTLAYS

181.4	195.4	215.9	20.5
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PRESIDENTS BUDGET PAY AND INFLATION RATE ASSUMPTIONS

FY 1981 - FY 1987 ANNUAL PERCENTAGE CHANGE

<u>CATEGORY</u>	<u>1981 TO 1982</u>	<u>1982 TO 1983</u>	<u>1983 TO 1984</u>	<u>1984 TO 1985</u>	<u>1985 TO 1986</u>	<u>1986 TO 1987</u>
PAY						
MILITARY	14.3	8.0	7.6	5.5	5.0	5.0
GENERAL SCHEDULE	4.8	5.0	5.0	5.0	5.0	5.0
WAGE BOARD	4.8	5.0	4.0	4.0	4.0	5.0
MILITARY RETIRED PAY	6.6	6.5	4.3	3.3	2.9	2.9
INDUSTRY PURCHASES (NON-PAY)	8.3	7.0	5.9	5.9	5.4	5.3
COMPOSITE, DoD	8.7	6.9	5.9	5.5	5.1	5.0

LONG-RANGE FORECASTS AND PAY/PRICE ASSUMPTIONS

	FY 1982	FY 1983	FY 1984	FY 1985	FY 1986	FY 1987
TOA (\$ BILLIONS)						
MILITARY RETIRED PAY	15.0	16.5	17.7	18.9	20.0	21.1
OTHER MILITARY FUNCTIONS	199.2	214.5	267.8	312.8	347.6	379.7
TOTAL, CURRENT PRICES	214.2	258.0	285.5	331.7	367.6	400.8
TOTAL CONSTANT (FY 1983) PRICES	227.8	258.0	269.8	297.8	314.0	325.9
PERCENT CHANGE	12.7%	13.2%	4.6%	10.4%	5.4%	3.8%
OUTLAYS (\$ BILLIONS)						
MILITARY RETIRED PAY	15.0	16.5	17.7	18.8	19.9	21.1
OTHER MILITARY FUNCTIONS	167.8	199.4	229.3	266.7	304.1	334.9
TOTAL, CURRENT PRICES	182.8	215.9	247.0	285.5	324.0	356.0
TOTAL CONSTANT (FY 1983) PRICES	195.4	215.9	233.2	255.6	276.0	288.7
PERCENT CHANGE	7.7%	10.5%	8.0%	9.6%	8.0%	4.6%
COMPOSITE PAY/PRICE ASSUMPTIONS OUTLAYS (FY 1983=100)	93.6	100.0	105.9	111.7	117.4	123.3

DEPARTMENT OF DEFENSE BUDGET FINANCIAL SUMMARY

(\$ BILLIONS)

APPROPRIATION TITLE	CURRENT DOLLARS TOTAL OBLIGATIONAL AUTHORITY			CHANGE FY 1982-1983
	FY 1981	FY 1982	FY 1983	
MILITARY PERSONNEL	36.7	43.0	47.9	4.9
RETIRED PAY	13.7	15.0	16.5	1.5
OPERATION AND MAINTENANCE	55.2	63.0	70.4	7.4
PROCUREMENT	47.8	65.4	89.6	24.2
RDT&E	16.6	20.0	24.3	4.3
MILITARY CONSTRUCTION	3.4	5.1	5.4	0.4
FAMILY HOUSING	2.0	2.3	2.8	0.5
REVOLVING & MANAGEMENT FUNDS	0.5	0.5	0.9	0.5
TOTAL MILITARY FUNCTIONS	176.1	214.2	258.0	43.7

Note: Totals may not add due to rounding

DEPARTMENT OF DEFENSE BUDGET FINANCIAL SUMMARY

BY APPROPRIATION CATEGORY - CONSTANT PRICES

(\$ BILLIONS)

CONSTANT FY 1983 DOLLARS
TOTAL OBLIGATIONAL AUTHORITY

APPROPRIATION TITLE	FY 1981	FY 1982	FY 1983	CHANGE FY 1982-1983
MILITARY PERSONNEL	44.6	46.3	47.9	+ 1.6
RETIRED PAY	15.6	16.0	16.5	+ 0.5
OPERATION AND MAINTENANCE	61.5	66.3	70.4	+ 4.2
PROCUREMENT	54.8	69.8	89.6	+19.8
RD&E	18.9	21.2	24.3	+ 3.1
MILITARY CONSTRUCTION	3.8	5.3	5.4	+ 0.1
FAMILY HOUSING	2.3	2.4	2.8	+ 0.4
REVOLVING & MANAGEMENT FUNDS	0.6	0.5	0.9	+ 0.4
TOTAL MILITARY FUNCTIONS	202.2	227.8	258.0	+ 30.2

TOTALS MAY NOT ADD DUE TO ROUNDING

DEPARTMENT OF DEFENSE BUDGET
FINANCIAL SUMMARY BY MAJOR PROGRAM

(BILLIONS OF \$)

<u>MILITARY PROGRAM</u>	<u>CURRENT DOLLARS</u> <u>TOTAL OBLIGATIONAL AUTHORITY</u>			<u>CHANGE</u> <u>FY 1982-1983</u>
	<u>FY 1981</u>	<u>FY 1982</u>	<u>FY 1983</u>	
<u>STRATEGIC FORCES</u>	12.7	16.2	23.1	+ 6.9
GENERAL PURPOSE FORCES	68.3	88.0	106.5	+ 18.5
INTELLIGENCE AND COMMUNICATIONS	11.2	14.0	18.0	+ 4.0
AIRLIFT AND SEALIFT	2.9	4.0	4.4	+ 0.3
GUARD AND RESERVE FORCES	9.9	11.6	14.3	+ 2.8
RESEARCH AND DEVELOPMENT	14.2	16.9	20.1	+ 3.2
CENTRAL SUPPLY AND MAINTENANCE	17.6	19.2	22.2	+ 3.0
TRAINING, MEDICAL, OTHER GEN. PERS. ACTIV.	35.0	39.8	44.2	+ 4.5
ADMINISTRATIVE AND ASSOC. ACTIVITIES	3.4	3.6	4.3	+ 0.7
SUPPORT OF OTHER NATIONS	0.9	1.0	0.9	-0.1
TOTAL MILITARY FUNCTIONS	176.1	214.2	258.0	43.7

Note: May not add due to rounding

**DEPARTMENT OF DEFENSE BUDGET
FINANCIAL SUMMARY
BY MAJOR PROGRAM—CONSTANT PRICES**

(BILLIONS OF \$)

MILITARY PROGRAM	CONSTANT FY 1983 DOLLARS TOTAL OBLIGATIONAL AUTHORITY			CHANGE
	FY 1981	FY 1982	FY 1983	FY 1982-1983
STRATEGIC FORCES	14.6	17.2	23.1	+ 5.9
GENERAL PURPOSE FORCES	78.9	93.8	106.5	+ 12.7
INTELLIGENCE AND COMMUNICATIONS	12.8	14.8	18.0	+ 3.2
AIRLIFT AND SEALIFT	3.4	4.3	4.4	+ 0.1
GUARD AND RESERVE FORCES	11.4	12.3	14.3	+ 2.1
RESEARCH AND DEVELOPMENT	16.2	17.9	20.1	+ 2.2
CENTRAL SUPPLY AND MAINTENANCE	19.6	20.3	22.2	+ 1.9
TRAINING, MEDICAL, OTHER GEN. PERS. ACTIV.	40.4	42.4	44.2	+ 1.8
ADMINISTRATIVE AND ASSOC. ACTIVITIES	3.8	3.8	4.3	+ 0.5
SUPPORT OF OTHER NATIONS	1.0	1.1	0.9	- 0.2
TOTAL MILITARY FUNCTIONS	202.2	227.8	258.0	30.2

Note: May not add due to rounding

DEPARTMENT OF DEFENSE BUDGET DEFENSE EMPLOYMENT OUTLOOK

(END-YEAR-IN-THOUSANDS)

	FY 64	FY 68	FY 75	FY 81	FY 82	FY 83	CHANGE FY 82-83
CIVILIANS							
ARMY	453	542	401	372	383	386	+ 3
NAVY/MARINE CORPS	346	433	326	321	319	321	+ 2
AIR FORCE	338	357	278	246	247	243	- 4
DEFENSE AGENCIES	37	74	73	80	84	86	+ 1
TOTAL CIVILIANS	1,174	1,405	1,078	1,019	1,033	1,035	+ 2
MILITARY (ACTIVE)							
ARMY	972	1,570	784	781	784	784	- 1
NAVY ^a	667	765	535	540	553	569	+16
MARINE CORPS	190	307	196	191	192	195	+ 3
AIR FORCE	856	905	613	570	581	600	+19
TOTAL MILITARY	2,685	3,547	2,128	2,082	2,110	2,148	+37
TOTAL MILITARY AND CIVILIANS	3,859	4,952	3,206	3,101	3,143	3,183	+40
DEFENSE RELATED INDUSTRY	2,280	3,174	1,800	2,230	2,515	2,862	+347
TOTAL DEFENSE MANPOWER	6,139	8,126	5,006	5,331	5,658	6,045	+387

^a REFLECTS TRANSFER OF 12,000 FULL TIME END STRENGTH TO RESERVE PERSONNEL NAVY IN FY 1983

APPENDIX B

TABLE 1

Department of Defense

General and Flag Officer Strengths

<u>Actual</u>	<u>General and Flag Officer Strengths</u>	<u>General and Flag Officers Per 10,000 Total Military</u>
1960	1,260	5.1
1961	1,254	5.0
1962	1,303	4.6
1963	1,292	4.8
1964	1,294	4.8
1965	1,287	4.8
1966	1,320	4.3
1967	1,334	4.0
1968	1,352	3.8
1969	1,336	3.9
1970	1,339	4.4
1971	1,330	4.9
1972	1,324	5.7
1973	1,291	5.7
1974	1,249	5.8
1975	1,199	5.6
1976	1,184	5.7
1977	1,174	5.7
1978	1,159	5.6
1979	1,119	5.4
1980	1,119	5.5
1981	1,118	5.4
	1,073	5.2
<u>Programmed</u>		
1982	1,119	5.3
1983	1,119	5.3

TABLE 2

Department of Defense
Officer and Enlisted Strength

<u>Actual</u>	<u>Officer Strength (000s) ^{1/}</u>	<u>Enlisted to Officer Ratio</u>
1960	317	6.8
1961	315	6.9
1962	343	7.2
1963	334	7.1
1964	337	7.0
1965	339	6.8
1966	349	7.9
1967	384	7.8
1968	416	7.5
1969	419	7.3
1970	402	6.3
1971	371	6.3
1972	336	5.9
1973	321	6.0
1974	302	6.2
1975	292	6.3
1976	281	6.4
1977	279	6.5
1978	275	6.5
1979	273	6.5
1980	273	6.4
1981	277	6.3
	285	6.3
<u>Programmed</u>		
1982	290	6.2
1983	298	6.2

^{1/} Includes all officers on extended active duty.

TABLE 3

Department of Defense
Manpower Levels
(End Year - In Thousands)

<u>Actual</u>	<u>Active Military</u> ^{1/}	<u>Civilian</u> ^{2/}	<u>Total</u>
1960	2,476	1,230	3,706*
1961	2,494	1,215*	3,709*
1962	2,808	1,244	4,052
1963	2,700	1,226	3,926
1964	2,687	1,176	3,863
1965	2,655	1,155	3,810
1966	3,094	1,261	4,355
1967	3,377	1,398	4,775
1968	3,547	1,393	4,940
1969	3,460	1,391	4,851
1970	3,066	1,265	4,331
1971	2,714	1,190	3,904
1972	2,322	1,159	3,481
1973	2,252	1,100	3,352
1974	2,161	1,109	3,270
1975	2,127	1,078	3,205
1976	2,081	1,047	3,128
1977	2,083	1,042	3,125
1977	2,074	1,022	3,096
1978	2,061	1,016	3,077
1979	2,024	991	3,015
1980	2,050	990	3,040
1981	2,082	1,019	3,101
<u>Programmed</u>			
1982	2,110	1,033	3,143
1983	2,148	1,035	3,183

^{1/} Excludes military personnel on active duty who are paid from Civil Works and Reserve Components appropriations.

^{2/} Direct and indirect hire. Excludes Civil Functions, special youth employment programs, and NSA employees.

* Estimated.

TABLE 4

Active Duty Military Personnel, Reserve Component Military
Personnel, and Civilian Personnel Strength ^{1/}
(End Years -- In Thousands)

	<u>1964</u>	<u>1968</u>	<u>1972</u>	<u>1976</u>	<u>1980</u>	<u>1981</u>	<u>1982</u> ^{2/}	<u>1983</u>
Active Duty Military								
Army	972	1,570	811	779	777	781	784	784
Navy	667	765	588	525	527	540	553	569
Marine Corps	190	307	198	192	188	191	192	195
Air Force	856	905	726	585	558	570	581	600
Total	2,685	3,547	2,322	2,081	2,050	2,082	2,110	2,148
Reserve Components (Selected Reserve)								
Army National Guard	382	389	388	362	367	389	398	417
Army Reserve	269	244	235	195	207	225	252	269
Naval Reserve	123	124	124	97	87	88	94	106
Marine Corps Reserve	46	47	41	30	35	37	39	40
Air National Guard	73	75	89	91	96	98	100	102
Air Force Reserve	61	43	47	48	59	62	64	67
Total	953	922	925	823	851	899	946	1,000
Direct Hire Civilian								
Army ^{3/}	360	462	367	329	312	318	322	323
Navy	332	419	342	311	298	310	308	309
Air Force ^{3/}	305	331	280	248	231	233	233	229
Defense Agencies	38	75	61	72	75	79	84	86
Total ^{3/}	1,035	1,287	1,050	960	916	940	947	947

^{1/} Numbers may not add to total due to rounding.

^{2/} FY 1982 column of the FY 1983 Budget.

^{3/} These totals include Army and Air National Guard technicians, who were converted from State to Federal employees in FY 1979. The FY 1964 and 1968 totals have been adjusted to include approximately 38,000 and 39,000 technicians respectively.

TABLE 5

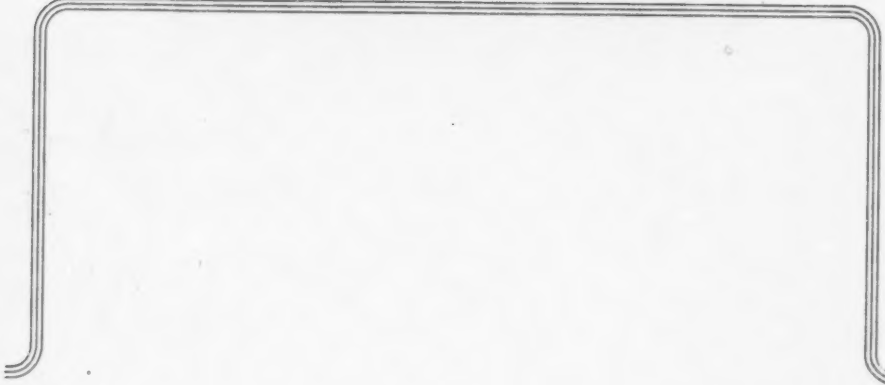
U.S. Military Personnel in Foreign Areas ^{1/}
(End Year — In Thousands)

	<u>1964</u>	<u>1968</u>	<u>1972</u>	<u>1976</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>
Germany	263	225	210	213	234	239	244	248
Other Europe	119	66	62	61	61	61	65	64
Europe, Afloat	54	23	26	41	35	25	22	25
South Korea	63	67	41	39	42	39	39	38
Japan and Ryukyus	89	79	64	45	46	46	46	46
Other Pacific	27	37	25	27	16	15	15	15
Pacific Afloat (including Southeast Asia)	52	94	51	24	26	22	15	25
Thailand	4	48	47	1	—	—	—	—
South Vietnam	16	534	47	—	—	—	—	—
Miscellaneous Foreign	<u>68</u>	<u>27</u>	<u>22</u>	<u>8</u>	<u>12</u>	<u>11</u>	<u>42</u>	<u>39</u>
Total	755	1,200	595	460	472	458	489	502

^{1/} Numbers may not add to totals due to rounding.

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PAGES

SOVIET MILITARY POWER



"The more constructive East-West relationship which the Allies seek requires tangible signs that the Soviet Union is prepared to abandon the disturbing buildup of its military strength, to desist from resorting to force and intimidation and to cease creating or exploiting situations of crisis and instability in the Third World."

*From the Communiqué of the
NATO Foreign Ministers Meeting
May 1981*

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The illustrations of new Soviet weapons systems introducing each chapter are derived from various U.S. sources; while not precise in every detail, they are as authentic as possible.

PREFACE

The Soviet Armed Forces today number more than 4.8 million men. For the past quarter century, we have witnessed the continuing growth of Soviet military power at a pace that shows no signs of slackening in the future.

All elements of the Soviet Armed Forces—the Strategic Rocket Forces, the Ground Forces of the Army, the Air Forces, the Navy and the Air Defense Forces—continue to modernize with an upending flow of new weapons systems, tanks, missiles, ships, artillery and aircraft. The Soviet defense budget continues to grow to fund this force buildup, to fund the projection of Soviet power far from Soviet shores and to fund Soviet use of proxy forces to support revolutionary factions and conflict in an increasing threat to international stability.

To comprehend the threat to Western strategic interests posed by the growth and power projection of the Soviet Armed Forces it is useful to consider in detail the composition, organization and doctrine of these forces, their ideological underpinning, and their steady acquisition of new, increasingly capable conventional, theater nuclear and strategic nuclear weapons systems. It is equally important to examine the USSR's industrial base, military resource allocations, and continuing quest for military/technological superiority which contribute to the effectiveness of its armed forces and proxy forces, and which support the Soviets' position as a world leader in arms exports.

The facts are stark:

- The Soviet Ground Forces have grown to more than 180 divisions—motorized rifle divisions, tank divisions and airborne divisions—stationed in Eastern Europe, in the USSR, in Mongolia, and in combat in Afghanistan. Soviet Ground Forces have achieved the capacity for extended intensive combat in the Central Region of Europe.
- The Soviets have fielded 50,000 tanks and 20,000 artillery pieces. The Soviet divisions are being equipped with the newer, faster, better armored T-64 and T-72 tanks. Some artillery units, organic to each division, include new, heavy mobile artillery, multiple rocket launchers and self-propelled, armored 122-mm and 152-mm guns.
- More than 5,200 helicopters are available to the Soviet Armed Forces, including increasing numbers of Mi-8 and Mi-24 helicopter gunships used in direct support of ground forces on the battlefield.
- More than 3,500 Soviet and Warsaw Pact tactical bombers and fighter aircraft are located in Eastern Europe alone. In each of the last eight years, the Soviets have produced more than 1,000 fighter aircraft.
- Against Western Europe, China and Japan, the Soviets are adding constantly to deliverable nuclear warheads, with the number of launchers growing, with some 250 mobile, SS-20 Intermediate Range Ballistic Missile launchers in the field, and with three nuclear warheads on each SS-20 missile.

- The Soviets continue to give high priority to the modernization of their Intercontinental Ballistic Missile (ICBM) force and their Submarine Launched Ballistic Missile (SLBM) force stressing increased accuracy and greater warhead throwweight. The Soviet intercontinental strategic arsenal includes 7,000 nuclear warheads, with 1,398 ICBM launchers, 950 SLBM launchers and 156 long-range bombers. This does not include some 150 nuclear-capable BACKFIRE bombers.

- The Soviets have eight classes of submarines and eight classes of major surface warships, including nuclear-powered cruisers and new aircraft carriers, presently under construction. This growing naval force emerging from large, modern shipyards is designed to support sustained operations in remote areas in order to project Soviet power around the world.

- The Soviet Air Defense Forces man 10,000 surface-to-air missile launchers at 1,000 fixed missile sites across the Soviet Union.

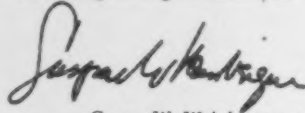
- The growth of the Soviet Armed Forces is made possible by the USSR's military production base which continues to grow at the expense of all other components of the Soviet economy. There are 135 major military industrial plants now operating in the Soviet Union with over 40 million square meters in floor space, a 34 percent increase since 1970. In 1980, these plants produced more than 150 different types of weapons systems for Soviet forces and for export to client states and developing countries.

- Today, the Soviets have more than 85,000 men fighting in Afghanistan. Soviet naval forces are deployed in the major oceans of the world. The USSR is gaining increased access to military facilities and is supporting proxy conflicts in Africa, Southwest Asia, Southeast Asia and the Western hemisphere.

There is nothing hypothetical about the Soviet military machine. Its expansion, modernization, and contribution to projection of power beyond Soviet boundaries are obvious.

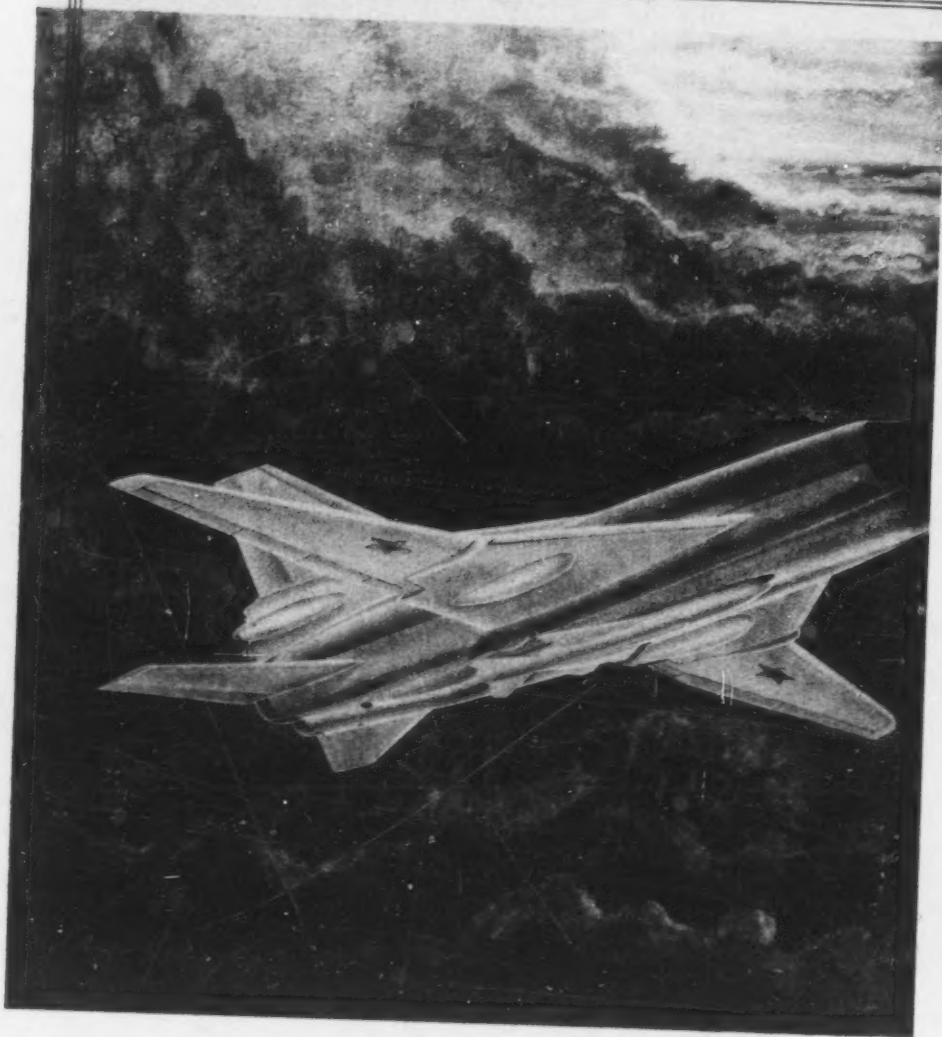
A clear understanding of Soviet Armed Forces, their doctrine, their capabilities, their strengths and their weaknesses is essential to the shaping and maintenance of effective U.S. and Allied Armed Forces.

The greatest defense forces in the world are those of free people in free nations well informed as to the challenge they face, firmly united in their resolve to provide fully for the common defense, thereby deterring aggression and safeguarding the security of the world's democracies.

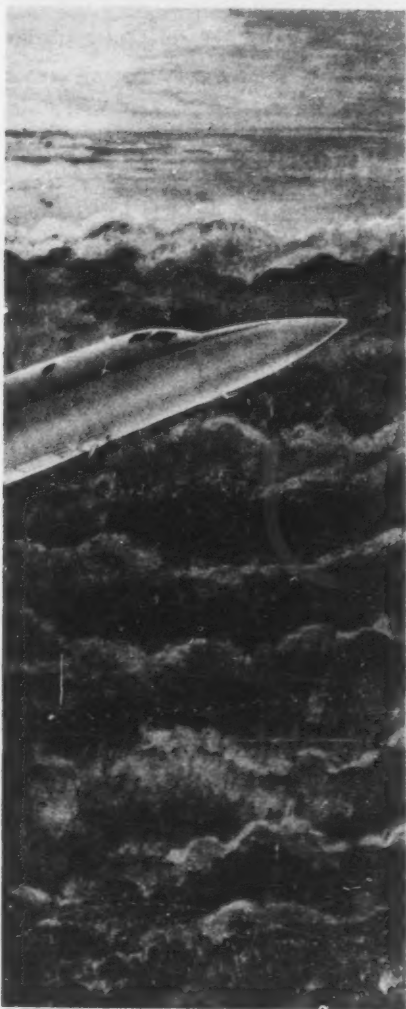


Caspar W. Weinberger
Secretary of Defense

I SOVIET MILITARY POW



ER



This document, which is a distillation of briefings provided to the NATO Ministers of Defense, describes the totality of the Soviet military buildup in some detail. Free people can better determine the challenges they face and the decisions required if armed with adequate factual knowledge of the threat. For this reason, the Secretary of Defense has had this document prepared and published.

Soviet Military Power presents a factual portrayal of the Soviet Armed Forces, a review intended to be as informative as possible on an issue of the utmost importance to the United States and its Allies.

The chart "Soviet Military Forces," on pages six and seven of Chapter I, depicts the size, composition and deployment of the USSR's Strategic Nuclear Forces, Ground Forces, Air Forces, Air Defense Forces and Naval Forces.

Chapter II, Military Resource Allocation, examines the Soviet and non-Soviet Warsaw Pact military industrial base, the world's largest in facilities and physical size.

Chapter III, Organization of Soviet Armed Forces, describes the USSR's strategic command structure, command and control, logistic support and combat doctrine.

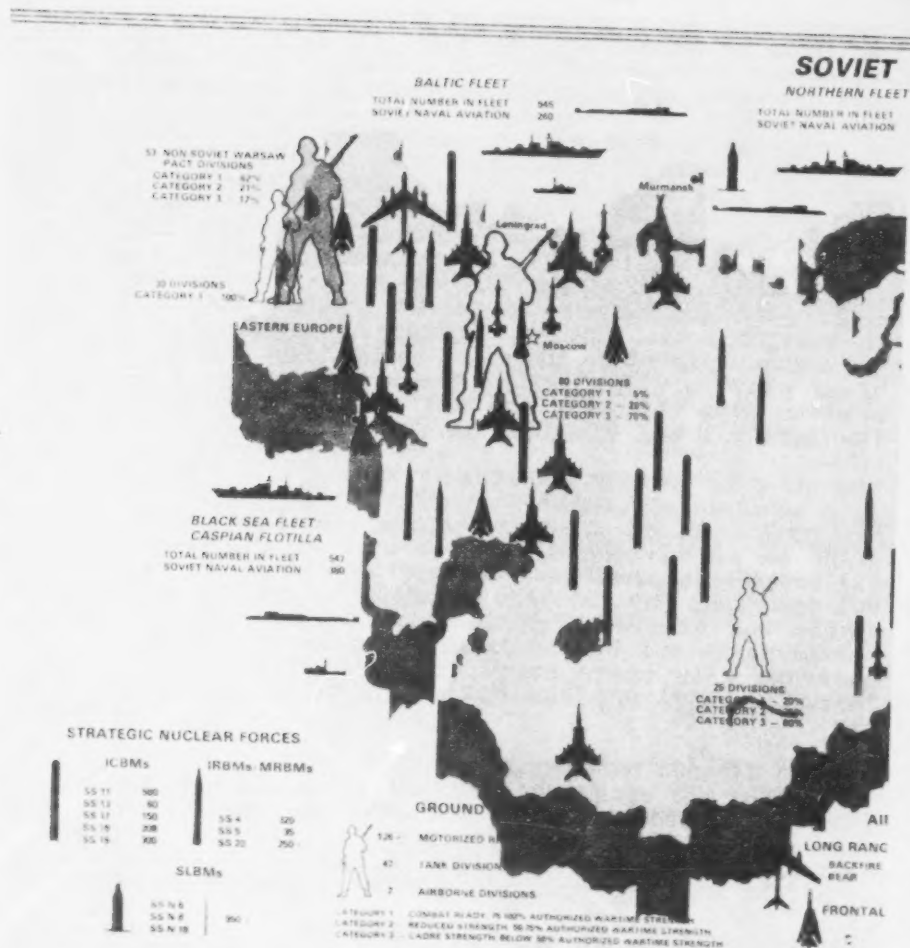
Chapter IV reviews those Soviet Armed Forces designated for theater operations, nuclear and conventional land, sea and air forces—forces geared to fast-paced offensive operations, forces arrayed against the nations of Western Europe.

Chapter V describes the increasing capabilities of the Soviet Strategic Forces, including the SS-17, SS-18, and SS-19 missiles of the ICBM forces, and the continuing modernization of the submarine launched ballistic missile forces.

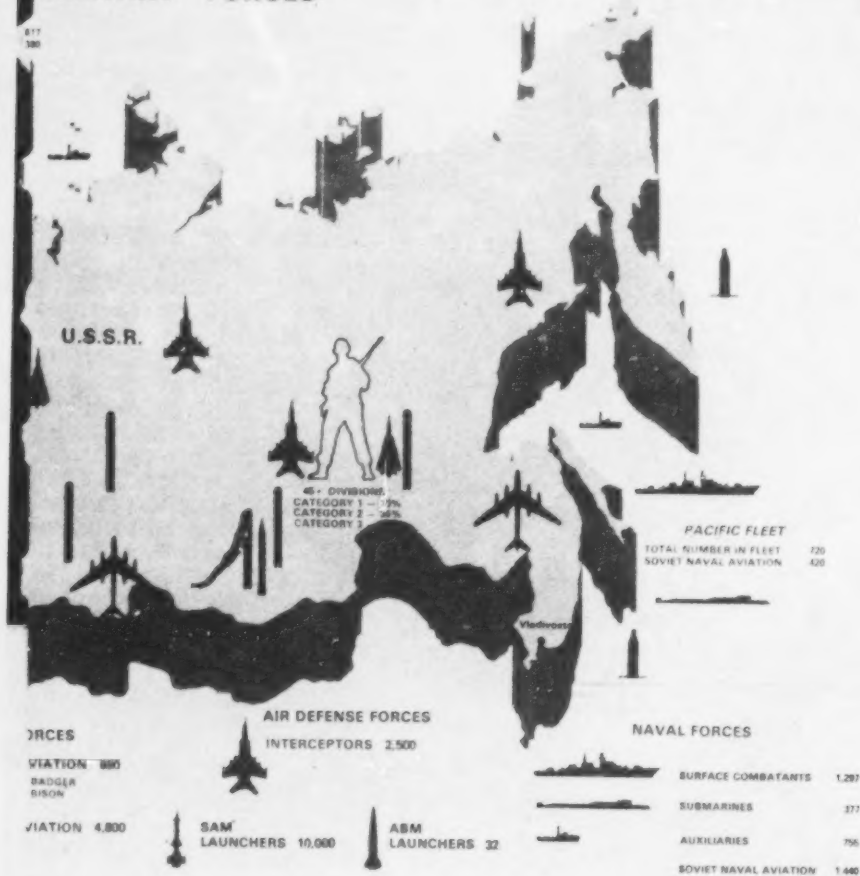
Chapter VI reports on the Research and Development effort behind the USSR's drive for modern military technology.

Chapter VII reviews the application of Soviet military power today, and Chapter VIII summarizes the challenge posed by the Soviet Armed Forces.

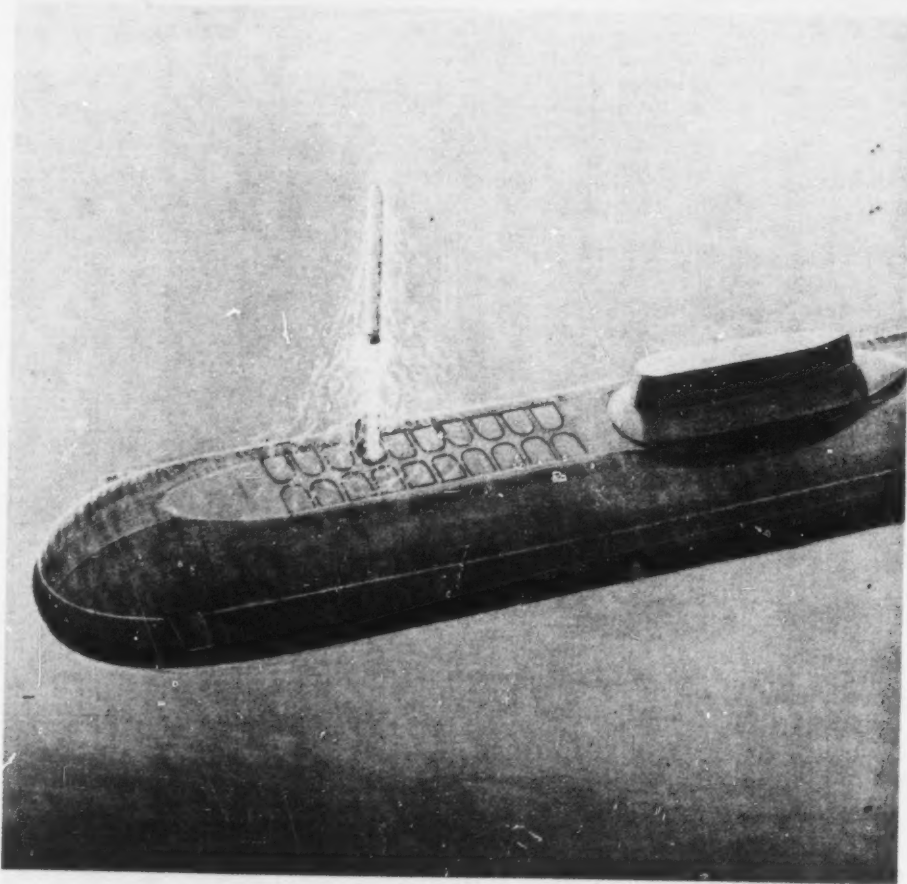
The Tupolev BACKFIRE, swing-wing, turbofan powered bomber capable of carrying free-fall bombs or air-to-surface missiles entered service in the mid-1970s. Thirty new BACKFIRES are being built each year in the continuing expansion and modernization of Soviet military power.



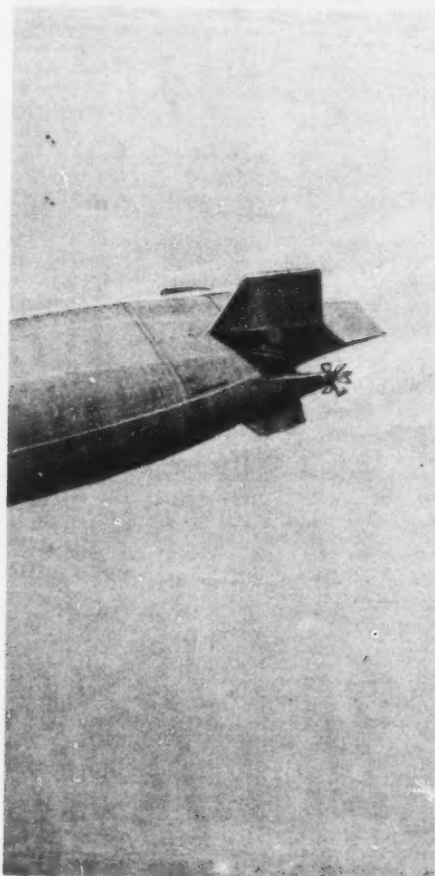
MILITARY FORCES



II MILITARY RESOURCE



ALLOCATION



In 1980, the first of the Soviets' TYPHOON-Class 25,000-ton strategic ballistic missile submarines was launched from a newly completed construction hall at the Severodvinsk Shipyard on the White Sea. Earlier in the year the same shipyard launched the first of the extremely large OSCAR-Class guided missile nuclear submarines, a submarine capable of firing 24 long-range, antiship cruise missiles while remaining submerged.

In 1980, some 2,400 kilometers southeast of Severodvinsk, the mammoth Nizhny Tagil Railroad Car and Tank Plant, an industrial facility covering 827,000 square meters of floor space, manufactured 2,500 T-72 tanks.

To support the continuing growth and modernization of the armed forces, the Soviet Union over the past quarter century has increased military expenditures in real terms, devoting an average of 12 to 14 percent of its Gross National Product each year to the Soviet military. The estimated dollar costs of Soviet military investment exceeded comparable US spending by 70 percent in 1979. The defense sector is the first priority of Soviet industrial production.

The Soviet and non-Soviet Warsaw Pact military industrial base is by far the world's largest in number of facilities and physical size. The Soviet Union alone produces more weapons systems in greater quantities than any other country.

The Soviet military industry has grown steadily and consistently over the past 20 to 25 years. Its physical growth and the commitment of large quantities of financial and human resources is its most dynamic aspect, but its

The TYPHOON 25,000-ton strategic ballistic missile submarine was launched from the Severodvinsk Naval Shipyard in 1980. Severodvinsk, one of five Soviet yards building submarines, has produced seven different classes in the last decade.

cyclical production is its most important. Production plants remain at work. As old weapons programs are phased out, new ones are begun, leaving no down times or long periods of layoffs and inactivity. The cyclical process, the continuing facility growth and the high rates of production keep the arms industry in a high state of readiness to meet any contingency and any demand for new weapons. The military production industry includes 135 major final assembly plants involved in producing weapons as end products. Over 3,500 individual factories and related installations provide support to these final assembly plants.

Major Soviet Manufacturing Areas



- | | |
|---|---|
| 1. Strategic and Defensive Missiles
Missile Engines and Motors
Major Surface Combatants | 8. Tactical Aircraft
Missile Engines and Motors |
| 2. Strategic Aircraft
Aircraft Engines
Major Surface Combatants | 9. Tactical Aircraft |
| 3. Armored Vehicles
Tanks | 10. Strategic Aircraft
Aircraft Engines |
| 4. Tactical Aircraft
Aircraft Engines
Strategic and Defensive Missiles
Missile Engines and Motors | 11. Aircraft Engines
Strategic Missiles
Defensive Missiles
Armored Vehicles
Artillery, SP Guns and
Multiple Rocket Launchers |
| 5. Major Surface Combatants
Submarines
Tanks
Aircraft Engines
Missile Engines and Motors
Defensive Missiles | 12. Tactical Aircraft
Aircraft Engines
Missile Engines and Motors
Armored Vehicles
Tanks
Artillery, SP Guns and
Multiple Rocket Launchers |
| 6. Submarines
Tactical Aircraft
Armored Vehicles | 13. Strategic Missiles
Tactical Aircraft |
| 7. Major Surface Combatants
Strategic and Tactical Aircraft
Aircraft Engines
Strategic Missiles
Missile Engines and Motors
Armored Vehicles
Artillery, SP Guns and
Multiple Rocket Launchers | 14. Major Surface Combatants
Submarines
Strategic Missiles
Tactical Aircraft |

Construction at the Severodvinsk Naval Shipyard illustrates the growth of Soviet facilities over time. Over the past decade seven classes of submarines have been produced, and during this time, floor space has increased by several hundred thousand square meters, or approximately three quarters again the yard's size ten years earlier. The new large construction hall used to assemble the TYPHOON and OSCAR submarines accounted for about 25 percent of this increase. Moreover, Severodvinsk is only one of five Soviet yards producing submarines.

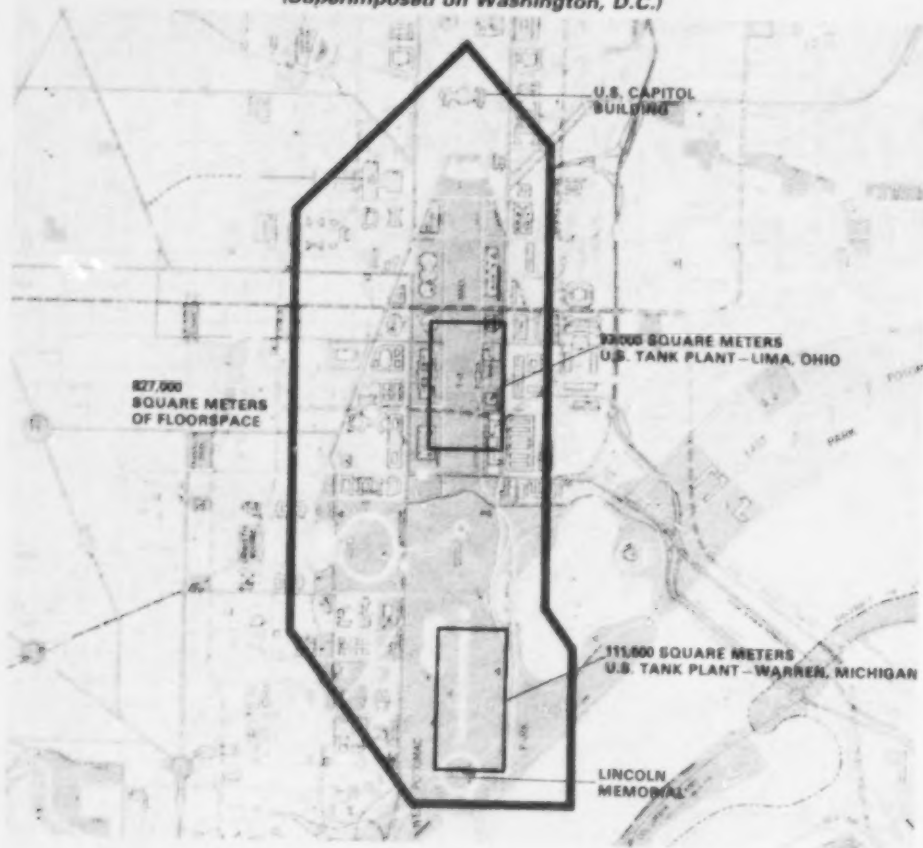
In the aerospace industry, even though there has been significant construction in recent years including a number of new large final assembly buildings at established plants, the Soviets have revealed that they are constructing a wholly new, large aircraft plant at Ulyanovsk. This plant, when completed, will be well-suited for the fabrication and assembly of large aircraft—transports or bombers—underscoring the Soviets' continuing drive to improve further their industrial base. Qualitative improvements in production technology, which typically accompany new and more sophisticated aircraft, have paralleled the physical growth of the industry.

The Army's sector of Soviet military industry is traditionally large to support the growing Ground Forces. Army industrial floorspace has expanded by over ten percent in the late 1970s. All segments of the Army's industrial base have been expanded despite their already massive size. For instance, a major Soviet tank producer which was already nearly five times as large as the US manufacturers, has again been expanded.

The Soviet Union and Warsaw Pact need all of these facilities for the large number of major weapons and support systems currently in production—more than 150 in all.

The following tables show estimates of production by weapon systems type over the past

AREA OF NIZHNIY TAGIL TANK PLANT
(Superimposed on Washington, D.C.)



**Production of Ground Forces Materiel
USSR and Non-Soviet Warsaw Pact**

	1976		1977		1978		1979		1980	
	USSR	NSWP	USSR	NSWP	USSR	NSWP	USSR	NSWP	USSR	NSWP
Tanks	2500	800	2500	800	2500	800	3000	800	3000	750
T-56	500	800	500	800	500	800	500	800	—	750
T-64	500	—	500	—	500	—	500	—	500	—
T-72	1500	—	1500	—	1500	—	2000	—	2500	—
T-80	—	—	—	—	—	—	—	—	—	—
Other Armored Fighting Vehicles	4500	1800	4500	1900	5500	1700	5800	1800	5800	1200
Towed Field Artillery	900	50	1300	50	1500	100	1500	100	1300	100
Self-Propelled Field Artillery	900	—	950	—	950	—	250	50	150	50
Multiple Rocket Launchers	500	250	550	200	550	150	450	150	300	150
Self-Propelled AA Artillery	800	100	900	100	100	50	100	50	100	50
Towed AA Artillery	900	300	250	250	100	200	—	200	—	150
Infantry Weapons	250,000	140,000	350,000	120,000	480,000	200,000	480,000	115,000	400,000	100,000

five years. A five year period was selected to demonstrate the Soviet ability to sustain high rates of production.

a new system, or increased orders for helicopters.

**Aircraft Production
USSR**

Aircraft Type	1976	1977	1978	1979	1980
Bombers	25	30	30	30	30
Fighters/					
Fighter-Bombers	1,200	1,280	1,300	1,300	1,300
Transports	450	400	400	400	360
Trainers	50	50	50	25	225
ASW	5	10	10	10	10
Helicopters	1,400	800	600	700	750
Utility	125	100	100	100	100
Total	3,255	2,690	2,480	2,985	2,785

The most important aspect of aircraft production is the sustained high rates of fighter aircraft production. Helicopter production shows a decline at midpoint, but then a gradual build-up probably indicating a phase-out/phase-in of

**Missile Production
USSR**

Missile Type	1976	1977	1978	1979	1980
ICBMs	300	300	250	200	200
IRBMs	50	100	100	100	100
SRBMs	100	200	250	300	300
SLCMs	600	600	600	700	700
SLBMs	150	175	225	175	175
ASMs	1,500	1,500	1,500	1,500	1,500
SAMs	40,000	50,000	50,000	50,000	50,000

Missile production shows the wide range of missiles in production. Every class of missiles, from Surface-to-Air to ICBMs, is produced in significant quantities.

Naval ship construction demonstrates the USSR's capability to sustain high rates throughout. Moreover, the number of auxiliary ships produced in Eastern Europe has freed Soviet building ways for other projects.

Naval Ship Construction USSR

	1976	1977	1978	1979	1980
Submarines	10	13	12	12	11
Major Combatants	12	12	12	11	11
Minor Combatants	58	56	52	48	52
Auxiliaries	4	5	4	7	5

Ground Forces Materiel Production USSR

	1976	1977	1978	1979	1980
Tanks	2,900	2,500	2,900	3,000	3,000
T-85	500	500	500	500	—
T-64	500	500	500	500	500
T-72	1,500	1,500	1,900	2,000	2,500
T-80				Trial Output	Trial Output
Other Armored Vehicles	4,500	4,500	5,500	5,500	5,500
Self-Propelled Field Artillery	900	950	850	250	150

Soviet Army materiel production shows a jump in the output of tanks and other armored vehicles in 1979 and 1980. The production of self-propelled artillery, however, exhibits a steady decline since 1977. This probably represents the phasing out of production of an old weapon and the introduction of a new one. Such transition is fairly common in Soviet production practices. The evolutionary introduction of new systems continues. Overall, Soviet Ground Forces materiel production has increased over the past five years.

An even greater increase is evident when Soviet Ground Forces materiel production is combined with that of the Warsaw Pact allies.

These weapons systems are produced to equip Soviet and Warsaw Pact forces and for export. In recent years, in addition to being the world's largest producer, the USSR has become the world's largest exporter of major items of military equipment to the Third World.

To provide nuclear weapons for their Armed Forces, the Soviets have an adequate number of plutonium and uranium production facilities to ensure a sufficient quantity of necessary material for those forces, and to ensure the provision of material for other high priority needs as well.

What impact does this massive dedication of resources to military products have on the USSR? The Soviet Union and the countries of the Warsaw Pact have, over the past decade, faced deteriorating economies while at the same time sustaining high levels of military equipment production for an across-the-board force modernization. The Soviets' own economy is in difficulty and facing competing priorities for scarce resources as it begins the 11th Five Year Plan. The problems include food shortages, low labor productivity, transportation disruptions and energy constraints which have all combined to bring industrial growth to a post-1945 low. Externally, the high costs of supporting other communist regimes, also in difficulty, such as Cuba, Vietnam, Afghanistan and Poland have created an additional burden. These difficulties have grown at the end of a decade during which Moscow's policy has been to stress guns over butter. Throughout the 1970s the Soviets have consistently allocated from 12-to-14 percent of Gross National Product to military programs in spite of a marked downward trend in the rate of economic growth. If this trend continues, the percentage allocated to the military will increase. There are no signs of a deemphasis of military programs.

The economic burden of defense spending, as viewed in the West, is viewed differently in the Soviet Union. To the Soviets, defense spending is a necessity and a priority above all else. Productivity might continue to decline and the Soviets might have to face a negative growth rate, but the system of fostering massive military industrial production will continue.

III ORGANIZATION OF S



SOVIET ARMED FORCES



Marshal of the Soviet Union and Warsaw Pact Commander-in-Chief Kulikov has written that the traumatic experience of World War II has taught the Soviets the necessity of having a fully operational strategic command structure in being prior to the onset of hostilities. To this end, the Soviets have created a wartime management structure which provides a unified system of command capable of exerting centralized direction, but designed to permit decentralization of functions to lower levels as necessary.

Immediate control of the Soviet land, sea and air forces is exercised by the Minister of Defense. Within the Soviet Government, the Minister of Defense is a member of the Council of Ministers, appointed by and technically answerable to the Supreme Soviet or to its Presidium. In practice he is responsible to the Central Committee of the Communist Party of the Soviet Union (CPSU) and its Politburo. The current Minister of Defense, Marshal of the Soviet Union Ustinov, is a member of the Politburo, as was his predecessor. The Defense Council, a subset of the Politburo chaired by the General Secretary of the CPSU, in effect functions as the controlling authority. In 1976, General Secretary Leonid Brezhnev was awarded the highest military rank, that of Marshal of the Soviet Union, possibly indicating that ultimate operational—as well as policymaking—control of the Soviet Union's Armed Forces was being vested in the Defense Council.

The combined arms army, the basic Soviet field army, includes four motorized rifle divisions, a tank division, an artillery brigade, missile units, frontal air support, and intelligence, chemical, engineer and signal units. There are more than 100 divisions in the Soviet Armed Forces today.

The key point to understand about the Soviet military control structure is that the reins of the instruments of state policy and power—not just the purely military—are in the hands of a tested political leadership supported by very experienced and long-established staffs. President Brezhnev and his key colleagues have been at the center of power for decades. Ustinov has guided the Soviet armaments industry since the early 1940s and has proven to be an able and decisive leader. These men, aided by such others as KGB Chief Andropov, Premier Tikhonov, Foreign Minister Gromyko, the ageless ideologue Suslov, Chief of General Staff Ogarkov, Warsaw Pact Commander Kulikov and lesser but equally experienced subchiefs of the military and industry, know how the Soviet military machine runs and what they want to achieve. They are able to marshal all available Soviet resources toward their strategic objective. They exercise absolute control of all instruments of Soviet power.

At the apex of the Soviet wartime strategic command structure is the State Defense Committee or GKO. The Defense Committee serves to unify the highest military and civilian leadership to insure centralized political direction of the entire war effort. This committee appears to consist of the permanent members of the peacetime Defense Council. Just as in World War II, the Defense Committee and its subordinate managerial entities would play a critical role in wartime economic mobilization and in overseeing sustained wartime production. Beneath the Defense Committee and its component elements is the vast ministerial structure of the Soviet government.

Under the guidance of the Defense Committee, a Supreme High Command (VGK) would serve as the highest organization of strategic military leadership. The Supreme High Command apparently includes the CPSU General

Secretary, the Minister of Defense, the first Deputy Ministers of Defense, the Chief of the Main Political Directorate, and the Commanders in Chief of each of the five services. The contribution of the General Staff, serving as an executive agent for the VGK, would be to insure the development and execution of a unified military strategy for the operational commands.

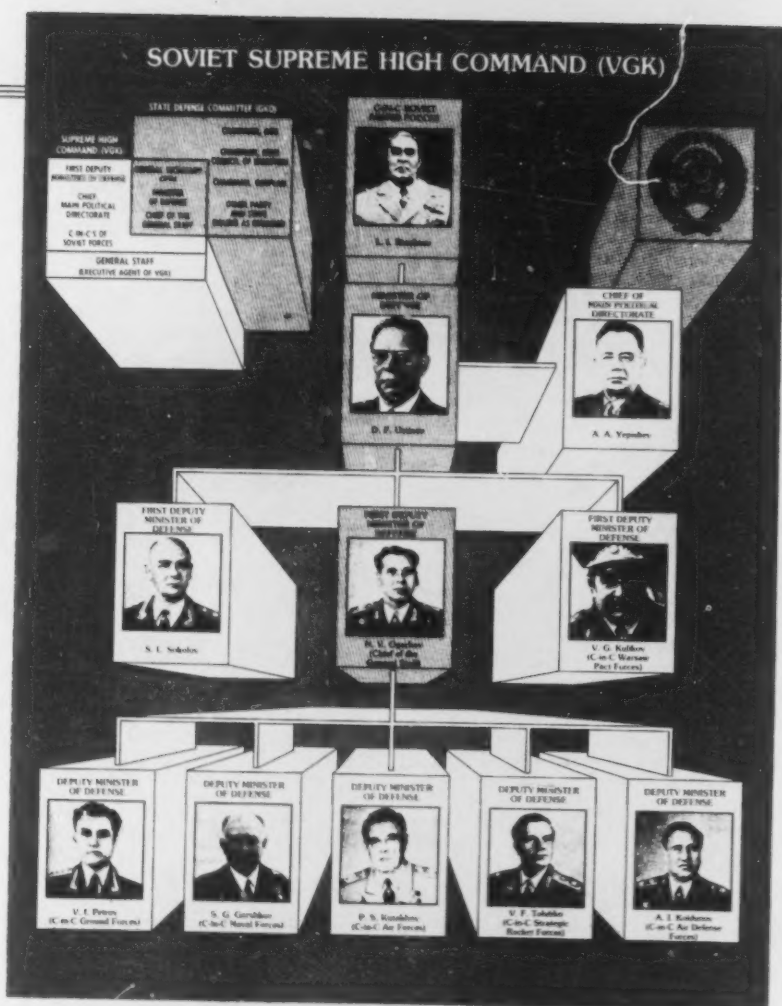
In order to simplify the planning for war, the Soviets have divided the world into 13 Theaters of Military Operations, or TVDs. The Theater of Military Operations is a geographical concept used to denote an area within which their armed forces would function in wartime. There appear to be possibly five continental TVDs, four maritime or naval TVDs, and four inter-continental TVDs.

Recognizing that the Soviet Supreme High Command would find it difficult to exercise the direction of multi-theater operations without an intermediate command echelon, the Soviets have apparently established intermediate-level high commands. This Soviet conceptual frame-

**Soviet Military Districts
and Groups of Forces**



- | | |
|------------------------------------|--------------------|
| 1. Group of Soviet Forces, Germany | 11. Carpathian |
| 2. Central Group of Forces | 12. Belorussian |
| 3. Northern Group of Forces | 13. Moscow |
| 4. Southern Group of Forces | 14. Odessa |
| 5. Baltic | 15. Kiev |
| 6. Leningrad | 16. Volga |
| 7. Ural | 17. North Caucasus |
| 8. Siberian | 18. Transcaucasus |
| 9. Transbaikal | 19. Central Asia |
| 10. Far East | 20. Turkestan |



work for intermediate-level strategic leadership is intended to accommodate centralized strategic planning with decentralized battle management.

The Theaters of Military Operations not only include the terrain upon which the *Fronts* would conduct their operations, but include those Military Districts that would support such operations. Thus, while forces may depart a Military District as battlefield operations progress, the Military District structure would be retained to serve as a principal wartime administrative entity.

The Soviets have carefully thought out and continue to develop the details of the system of strategic leadership. The system required for war fighting and war survival is now in place. Central to this system is the establishment of the means to ensure the survival of state control. The Soviets have, for years, been building an infrastructure of facilities and procedures which is geared to the survival of the means of control for the Communist Party of the Soviet Union during even the worst of conflict situations—a nuclear war. Alternative locations have been established for virtually the entire structure of the Soviet leadership—political, military, security and industrial—from the highest to the lowest levels. Many of these are bunkered facilities and certain levels of leadership are provided with mobile equipment as well.

COMMAND AND CONTROL

Utilizing the General Staff of the Ministry of Defense as its agent, the Soviet Defense Committee controls its military commands. To achieve this goal the Soviets have developed extensive and modern command, control and communications (C³) systems. Soviet doctrine emphasizes centralized control, survivability, redundancy and flexibility within the system.

Survivability is achieved through dispersal,

redundancy, hardness, concealment and mobility. Survivability is also enhanced by airborne command posts, which can be deployed to different locations to serve as alternate communications hubs in the event of war, hedging against the destruction of groundbase facilities.

Redundancy includes multiple command centers to assure continuity of the control of armed forces, and a wide variety of communications means and modes. Redundancy of Soviet C³ facilities is also achieved through the establishment of main and alternate command posts.

In the Soviet Union, the strategic command and control system maintains contact with widespread civil and military authorities. The system includes extensive networks of cable and open-wire lines, radio-relay links, radio-communications stations, and communications satellites. Modern Soviet telecommunications engineering concepts stress the flexibility, survivability and reliability of the system to meet national military command and control requirements for continuous telecommunications operations. The major national telecommunications complex is known as the unified communications system. In the event of war, the entire system could be readily converted into a nationwide military communications network.

Automation of Soviet command and control is evolving. The Soviet Air Defense Forces and the Moscow antiballistic missile system employ automation most extensively. The major strength of the Soviet/Warsaw Pact automation program is that systems are being developed specifically for military requirements rather than adapting other systems to military use.

Soviet satellites provide communications support to military, diplomatic, intelligence, and civilian organizations. The predominant communications satellite used in support of military command and control has been the MOLNIYA

I system. Since the mid-1960s, when the first MOLNIYA I was launched, the Soviet Union has continued to improve its communications satellite program. The Soviet Union has launched the improved MOLNIYA II and MOLNIYA III systems which can be used for military command and control. The MOLNIYA I and II military ground sites are deployed at major headquarters throughout the Soviet Union, and stations are beginning to be deployed in Eastern Europe.

The Soviets are maintaining vigorous research and development programs to upgrade their C² systems emphasizing the use of cable as the primary means of communication when practicable, and increasing use of satellite and point-to-point systems operating in a number of frequency ranges.

The Soviets can be expected to increase their use of automated systems which will increase their data handling capabilities as well as increase reaction times. As in the past, Soviet command and control systems will continue to employ redundancy, hardness and mobility to enhance survivability.

LOGISTIC SUPPORT OF THE SOVIET ARMED FORCES

The Deputy Defense Minister who is Chief of the Rear of the Soviet Armed Forces (NTVS) has management responsibility for the overall system of rear service support to the armed forces.

The Deputy Minister and his staff are located at Ministry of Defense Headquarters in Moscow. The first deputy to the NTVS serves as Chief of the Main Staff of the Rear, which plays a key role in the logistic establishment. From the Ministry headquarters, the Staff administers the fuel, food, clothing, military trade and technical supply organizations, the military medical and veterinary organizations, and other directorates and departments. This cen-

tralized system also includes a large number of Rear Services brigades, regiments and battalions as well as installations, bases, depots, arsenals, repair plants and other support assets for all armed forces components. All aspects of the movement of military supplies received from the national economy are managed by the Rear Services staff. In this management capacity, the Rear Services staff coordinates the activities of the deputy commanders for Rear Services of each of the branches as well as at the Military District, groups of forces and tactical levels.

Soviet wartime logistic planning is carried on at three general levels: strategic, operational and tactical. The NTVS is the principal controller of the numerous and diverse logistic organizations and assets comprising what Soviet planners call the "central Rear Services." There is a Rear Services counterpart at each subordinate echelon down to regiment. This officer, who is designated a deputy commander as well as the Chief of the Rear, is directly subordinate to his unit or formation commander, and in addition carries out the policies and guidelines of Rear Service representatives at higher levels.

The entire Rear Services establishment is designed to support military operations of all the Armed Forces with consumable supplies, weapon system stocks, maintenance assets, transportation resources, local security and a variety of logistic services deemed integral to the successful conduct of combat operations. In wartime, central logistic units, resources and command/control entities, in addition to serving as a USSR-based resource pool, may be moved into Theaters of Military Operations directly to support operational formations and organize the use of theater resources. Military command post complexes are present at all tactical and operational echelons.

The Soviets, and their Warsaw Pact military allies, conceived a system for automating Pact

Rear Service command and control in the early 1960s. Variations of this system have been field tested over the last decade. The system is designed principally to enable the Chief of the Rear at operational/strategic levels rapidly to evaluate his resources and assets in light of an envisioned operation; to formulate a Rear Service plan which optimally supports the commander's concept of operations; and to respond to the support requirements generated by rapidly changing battlefield situations.

Today, in the European Theater, for example, the Rear Services of the Soviet Armed Forces already have in place vast stocks of all the logistic supplies— from fuel, to ammunition, to weapon systems stocks—required for sustained combat.

COMBINED ARMS WARFARE

At the heart of Soviet combat doctrine is the concept of combined arms operations. To the Soviets, combined arms operations are more than the joint use of weapon systems and forces. The concept involves the bringing to bear of all systems and forces as needed in a unified and effective manner.

The Soviet Union's concept of combined arms operations, particularly at *Front* or theater levels, is much broader and more structured organizationally than the Western combined arms concept envisioning the joint and cooperative employment of ground, air and, if applicable, naval forces to achieve an objective. The operational definitions as provided by the Soviets in their combat doctrine permit a fuller understanding of the combined arms warfare concept.

- The Combined Arms Battle is a battle fought by a combined arms formation or unit together with attached formations or units of other service branches and aviation; and in maritime sectors, with

naval forces as well. The use of nuclear weapons and the participation of the various service branches or forces, in conjunction with the great mobility of the troops, impart an especially decisive and maneuver-oriented character to combined arms battle.

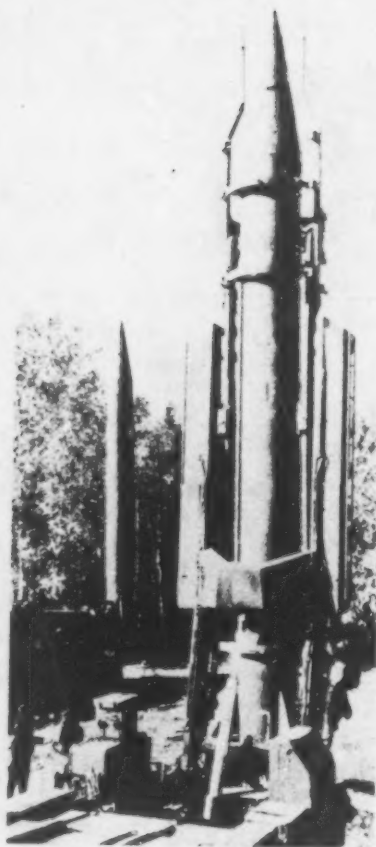
- The Combined Arms Commander is the sole commander of a combined arms formation, unit, or subunit. He organizes the combined arms combat of the forces subordinated to him, and leads them in battle. He makes the decision to engage the enemy, assigns combat missions to subunits, coordinates the actions of his own combined armed troops with those of neighboring troops, and directs his staff, and the commanders of the service branches and Services.

- The Combined Arms Staff is the staff of a major field force or of a formation or unit which includes formations, units or subunits of various service branches. The combined arms staff ensures coordination between the staffs of the subordinated and cooperating troops, and those of the service branches, special troops, services and rear. The combined arms staff takes all measures necessary to ensure the comprehensive preparation of the troops for their combat missions, and to ensure constant command and control of the troops during the course of battle (or operation).

At the *Front* level the Soviets are organized to control and employ coordinated ground, air, missile, air defense and, if appropriate, naval formations. The combined military power of all weapon systems is applied in a fully integrated plan. To insure the control of activities, the *Front* has a combined arms commander who is responsible for carrying out missions approved



Combined Arms Warfare, at the heart of Soviet combat doctrine, brings units from the different services, such as the tank, infantry, self-propelled artillery and missile units shown here, under one Combined Arms Commander.



by the General Staff Plan. It is his responsibility to oversee and coordinate the operations of his subordinate units and the commanders of the other services subordinated under his command. If the *Front* is operating near or in a maritime sector, naval forces will be under his command. As stated in the definition, he must also coordinate his activities with neighboring troops, most probably another *Front*.

The *Front* is the largest field formation in wartime. It is a tactical and administrative unit with size and composition subject to considerable variation depending upon the situation. A *Front* could be composed of three-to-five combined arms armies, one or two tank armies, plus aviation, air assault, diversionary, artillery, missile, air defense, engineer, signal, intelligence, reconnaissance and rear service units.

A combined arms army might include three or four motorized rifle divisions and a tank division, plus artillery, missile, air defense,

engineer, chemical defense, signal, intelligence, reconnaissance and rear service units.

The role of the tank army, a heavily armored force of tanks and motorized rifle troops, is to rupture and penetrate enemy defenses and to exploit breakthroughs deep into the enemy's rear areas. This army is a tactical and administrative unit capable of independent operations, although its normal employment, like that of the combined arms army, is as a component of a *Front*. The size of the army and its force composition are dependent upon the mission, the situation and the area of operations. There are three different types of maneuver divisions in the field forces: motorized rifle, tank, and airborne. The motorized rifle and tank divisions are the major combat and maneuver elements of the ground combat forces. Divisions are organized on a triangular basis. The motorized rifle division has three motorized rifle regiments, one tank regiment, one artillery



Armored Command Vehicle



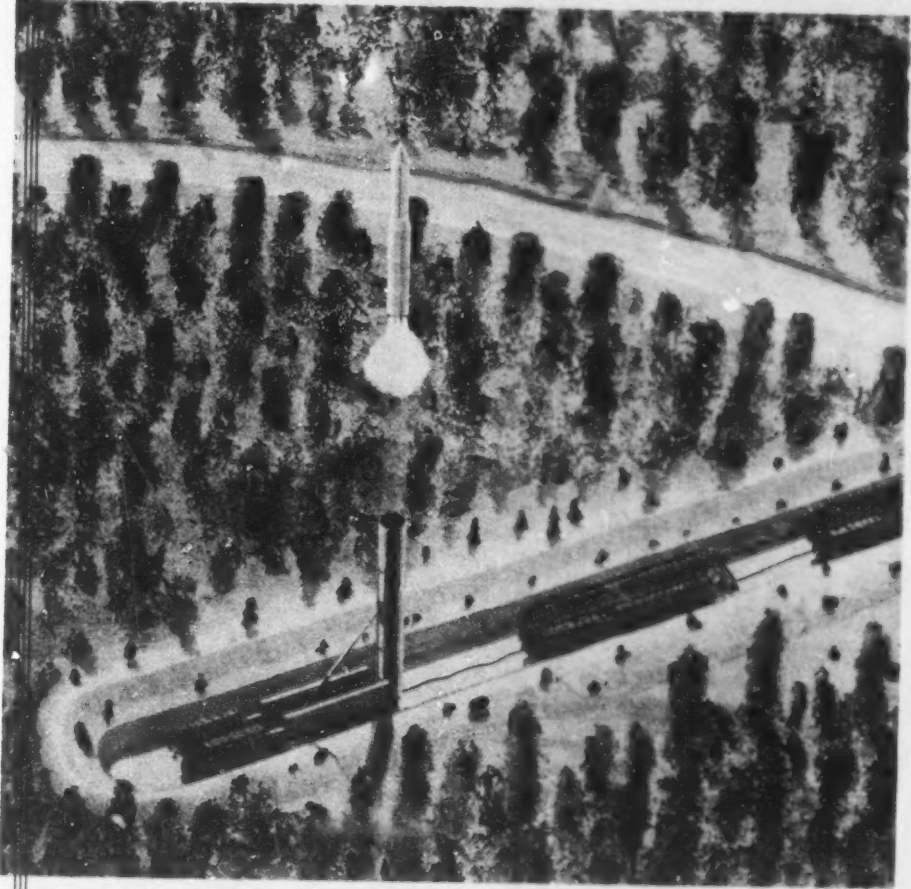
MI-24/HIND A Assault Helicopter

regiment, one air defense regiment and other support elements. The tank division forms around three tank regiments, one motorized rifle regiment, one artillery regiment, one air defense regiment and other support elements. Three airborne rifle regiments are the nucleus of the airborne division.

As few as one *Front* and as many as five may exist in a Theater of Military Operations (TVD). A High Command of Forces in a TVD is commanded by at least a three star general who is directly responsible to the Soviet General Staff. The commander is supported by a combined arms staff with the responsibility for overseeing and coordinating the activities of the various strategic formations. At the theater level the commander insures that the plans of the General Staff for his forces in the theater are carried out.

The General Staff controls the operations of the five services, while individual service chiefs are responsible for the training and support of troops, the development of tactics and the acquisition of weapons systems for their respective services. The services function under the General Staff to assure the mutual supportiveness of their training, tactics, and weapons acquisitions. In a wartime situation, the same system would apply, but the General Staff would operate as the executive agent of the national leadership and would adopt plans for control of the forces. The Soviets have organizationally structured their forces to form a unified command structure under the General Staff. This provides the Soviets with the command structure to apply the totality of their military power in warfare so that the whole of the operation is greater than the sum of its parts.

IV SOVIET THEATER FO



RCES



Over the past 15 years the Soviets have steadily expanded and upgraded their military forces designated for theater operations with particular attention directed toward the European theater. During this period, the Soviet objective for this modernization has been the conversion of the Red Army from a balanced offensive/defensive force to one geared to fast-paced offensive operations. A key aim appears to have been the provision in peacetime of a standing Army at the leading edge of the potential battlefield such that it could begin operations with minimal mobilization and, thereby, with little warning.

The forces are highly mobile, and they are organized and supplied for a rapid initial push from a peacetime posture. At the outset of a war, the Soviets plan to move quickly slicing through NATO forces in the Central Region and driving to the English Channel, while concurrently securing the northern and southern flanks. During the initial operations, necessary additional forces would be mobilized and moved to the battlefield. All of this the Soviets aim to accomplish before the full weight of NATO reinforcements could be brought to bear. The Soviets have given priority attention to all elements of their Armed Forces with a role to play in the sweep across Europe. Modernization and upgrading is underway in each of the following elements of Soviet Theater Forces:

- Long Range Missile and Air Forces
- Ground Forces
- Frontal Aviation
- Military Transport Aviation
- Special Purpose Forces
- Navy

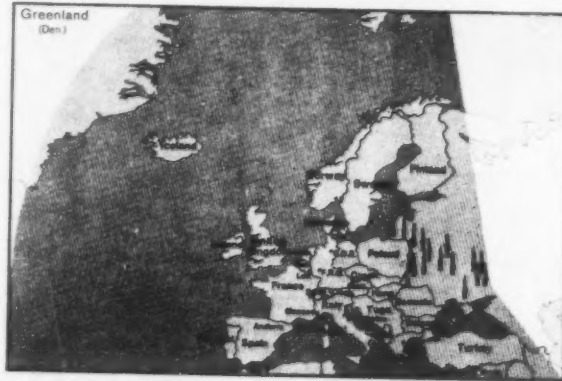
Soviet theater nuclear forces are being deployed in increasing numbers against Western Europe and Asia. Some 250 SS-20 mobile, MIRVed nuclear warheads, Intermediate Range Ballistic Missiles have been deployed. Three warheads per missile greatly increase Soviet firepower; mobility increases survivability.

LONG-RANGE THEATER MISSILES

Since the advent of the nuclear-tipped ballistic missile, the Soviets have dedicated significant numbers of nuclear, land-based missiles to theater warfare missions. No theater has been neglected, but the European theater has always commanded the greatest attention. The first medium-range ballistic missiles (MRBMs—1,000-to-3,000 kilometers) were fielded in the late 1950s, followed by improved MRBMs and new intermediate-range ballistic missiles (IRBMs—3,000-to-5,000 kilometers) in the early 1960s.

Soviet MRBM/IRBM Characteristics

	Warhead	Range	Propellant	Mobility
MRBM				
SS-4 SANDAL	1	2,000	Liquid	Fixed
IRBM				
SS-5 SKEAN	1	4,100	Liquid	Fixed
SS-20	3	5,000	Solid	Mobile



As the number of SS-20 missile launch sites in the Western USSR continues to grow, the Soviets intensify their tactical nuclear strike capability specifically targeted against Western Europe—SS-20 range and coverage extend beyond the shaded area.

More than 700 fixed launchers for these systems—the SS-3 and SS-4 MRBMs and the SS-5 IRBM—were operational at peak deployment in the mid-1960s. All but approximately 100 were directed at targets in or related to the European theater. The remainder were directed against the Middle East, South Asia and the Western Pacific littoral. China was not then a target. In the late 1960s, the Soviets began to draw down these, by then, obsolescent missiles, replacing them with ICBMs and adding coverage of the new enemy—China.

This situation remained unchanged until 1977 when the SS-20 IRBM first reached operational status. Previously, the theater-dedicated strategic nuclear missiles were based at fixed, vulnerable sites, and each missile carried only one warhead—although provisions for force reconstitution and refire were made. The SS-20 eliminated most of these weaknesses. Its launchers are highly mobile, and each SS-20 is fitted with three, very accurate and independently targetable (MIRVed) warheads. Moreover,

Soviet Medium and Intermediate Range Ballistic Missiles

each SS-20 unit is equipped with refire missiles—one per launcher—and each refire missile is fitted with three warheads. Thus the firepower of the theater strategic nuclear missile forces is being greatly multiplied, even though the Soviets are withdrawing older SS-4s and SS-5s from the forces as the SS-20s are deployed.

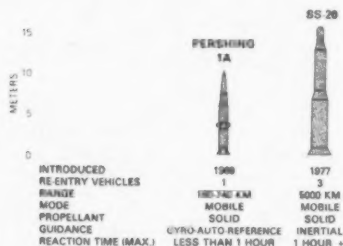
As of July 1981, some 250 SS-20 launcher/missile sets equipped with a total of 750 nuclear warheads had been deployed. Of these, 175 with 525 warheads are deployed opposite the NATO countries. There is no sign that the deployment is slackening. Since January 1981, the

pace of SS-20 base construction has increased, particularly opposite the NATO nations. At bases known to be under construction, another 65 launchers with some 195 warheads will be deployed. Perhaps as many as 100-to-150 additional launchers—300-to-450 warheads—could be fielded before the deployment program reaches its conclusion. While this modern nuclear force will continue to exhibit the full coverage of theater targets around the Soviet Union's periphery, it will be concentrated primarily against the European theater.

THE SOVIET GROUND FORCES

The Ground Forces, with a strength of 1,825,000, constitute the largest of the five major components of the Soviet Armed Forces. Traditionally, Imperial Russian and Soviet armies have been characterized by great numbers. Today, the Ground Forces are highly modernized and well equipped, possessing great firepower and mobility. Manpower and materiel combine to make the present Soviet Ground Forces the most powerful land army in the world.

Soviet leaders view an upgrading of the Soviet Ground Forces, in concert with an expanded Navy and improved strategic air transport capabilities, as adding a desirable flexibility to the exercise of Soviet military power on a global basis. The addition of some 30 divisions since about 1967 also reflects the Soviet view that war without resort to nuclear weapons, or at least without resort to strategic nuclear exchange, may be possible. To achieve these aims Soviet doctrine calls for clear-cut superiority at the outset of a conflict. Increased availability of helicopters, armored vehicles, amphibious vehicles, self-propelled artillery weapons and surface-launched guided missiles has provided the Ground Forces with unprecedented flexibility, mobility and firepower.



Characteristics of Primary US & Soviet Theater Missiles

Strength and Disposition: The Soviet Ground Forces currently contain more than 180 divisions at various stages of combat readiness. Of this total, 71 percent are motorized rifle divisions, 25 percent are tank divisions and four percent are airborne divisions.

These divisions are disposed as follows:

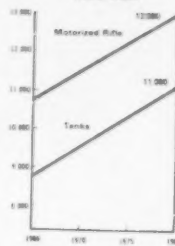
- 79 percent of the total are stationed inside the Soviet Union.
- 16 percent are stationed in Eastern Europe (East Germany, Poland, Czechoslovakia, and Hungary).
- 3 percent are stationed in Mongolia.
- 2 percent are engaged in combat operations in Afghanistan.

There are four basic deployment groupings: against NATO, against China, against the Middle East, and a strategic reserve. The largest, best-equipped and most combat ready of these is the Ground Forces group deployed against NATO.

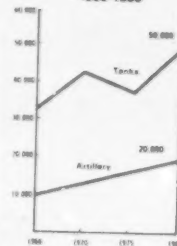
Modernization Program: The following graphs show the changes in manpower by type of division and the changes in the number of deployed tanks and artillery since 1966. Increases in personnel to 11,000 men in a tank division and almost 13,000 men in a motorized rifle division have resulted in an increase in the number of tanks and mobile combat vehicles per division.

Since the mid-1960s, the Soviets have engaged in a program of modernizing and upgrading ground forces to ensure a capability for carrying out offensive doctrine. Comprehensive in scope, this program has involved large-scale improvements in mobility, fire power, shock action, command and control, obstacle crossing capability, air defense, electronic warfare and logistical support. New and advanced equipment has been introduced. Highlights of this program, which has resulted in formidable and increasingly capable ground forces that now

Soviet Manpower by Type of Division 1966-1980



Soviet Tanks and Artillery 1966-1980



face NATO Europe and other areas contiguous to the USSR, include:

- Deployment of T-64 tanks in the Group of Soviet Forces, Germany (GSFG); fielding of T-72 tanks into Soviet units in the Western Military Districts; introduction of small numbers of T-72s in most non-Soviet Warsaw Pact armies; and continued development of a new tank, designated the T-80.
- Expansion of both division and non-division artillery units and some replacement of older, towed guns by self-propelled 122- and 152-mm weapons.
- Upgrading tactical capabilities by deployment of nuclear-capable heavy artillery brigades equipped with 203-mm howitzers and 240-mm mortars, and the introduction of the more accurate, longer-range and more mobile SS-21 and SS-X-23 tactical surface-to-surface missiles (SSMs) in ground forces as replacements for older FROGs and SCUDs.
- Replacement of the 900 kilometer SS-12/SCALEBOARD tactical missile with the more accurate SS-22.
- Replacement of older air defense gun

systems by a new family of surface-to-air missiles, some of which could have capabilities against enemy tactical ballistic missiles.

- Introduction of advanced radio systems and communications satellite equipment, airborne command posts and the gradual development of automated systems to enhance command, control and communications.

- Introduction of infantry combat vehicles into Soviet motorized rifle units, and the use of airborne assault vehicles and newly identified variants in airborne units.

- Introduction of Air Assault Brigades at the Front level.

Each of these deployments increases the Ground Forces' capability to launch a rapid thrust through Europe, the central theme of Soviet military thought.



122mm Self-Propelled Howitzer



152mm Self-Propelled Howitzer



T-64A Main Battle Tank



T-72 Main Battle Tank

The evolution of Soviet tanks illustrates the extent of Soviet Ground Forces modernization. Beginning in the late 1960s, the Soviets fielded the first and most sophisticated of their modern family of main battle tanks, the T-64A incorporating a number of unique and innovative features including:

- A 125 mm smoothbore gun and an automatic loader which allows reduction in crew size from four to three.

- Unconventional frontal armor and the inclusion of movable armored plates along the side of the hull.

- A compact, turbocharged diesel engine with a high horsepower-to-ton ratio.

The T-64A began deployment to the Group of Soviet Forces, Germany in 1976, and, since 1980, has been deployed to the Southern Group of Forces in Hungary.

The T-72, a high production tank complementary to the T-64A, entered operation in the

	Main Battle Tanks			
	T-64/85	T-72	T-64	T-72
				
WEIGHT (TONS)	38	37	35	41
SPEED (KM/HR)	50	50	50	60
MAIN ARMAMENT	100mm TANK GUN	110mm SMOOTHBORE	125mm SMOOTHBORE	125mm SMOOTHBORE
MUZZLE VELOCITY (MPS)	1,400	1,600	1,750	1,750

mid 1970s. This tank incorporates many of the features of the T-64A such as the 125-mm smoothbore gun and automatic loader and unconventional armor in the form of layered or laminate armor in the upper hull.

The direct fire range for the 125-mm gun is 2,000 meters firing the kinetic energy round. This means that at all ranges out to 2,000 meters, the gunner merely places a crosshair on the target and fires. In the 125-mm gun the automatic loader allows a rate of fire up to eight rounds per minute. For mobility, the 41 metric ton T-72 is powered by a 780 horsepower diesel which allows a top road speed of 60 kilometers per hour, and a cross country trail speed of up to 45 kilometers per hour.

While the T-64A and T-72 are formidable systems, the Soviets are nearing production of an even newer tank, the T-80.

Simultaneously with modernization activities, Soviet ground divisions also are undergoing a personnel and equipment expansion program. Major aspects involve the addition of an artillery battalion to the tank regiments of tank and motorized rifle divisions; expansion of the motorized rifle company to a battalion within tank regiments of tank divisions; and the addition of medium tanks to the reconnaissance battalions of both types of divisions. The expansion

program has included the Group of Soviet Forces, Germany.

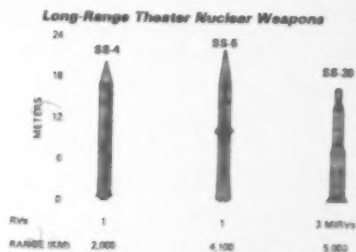
TACTICAL NUCLEAR WEAPONS

The Soviets have deployed large numbers of tactical nuclear delivery systems, and we believe they have stockpiled reloads for these systems. The Soviets rely on dual-capable systems for most of their shorter-range theater nuclear delivery capability and have adapted some of their 203-mm and 240-mm artillery pieces deployed in the USSR to fire nuclear projectiles. Towed 203-mm and 240-mm weapons are being re-



FROG Tactical Nuclear Surface-to-Surface Missile

placed with self-propelled models. Their medium-range launchers are capable of firing nuclear, conventional, or chemical munitions, and consist of the FROG (and its SS-21 replacement), the SCUD B (and its SS-X-23 replacement), and the SS-12/SCALEBOARD (and its SS-22 replacement). An increase in the number of nuclear-capable systems combined with modernization of these systems give the Warsaw Pact improved nuclear options. A *Front* normally has tactical rockets, such as the free-rocket-over-ground (FROG), and operational-tactical missiles (SCUDs) to complement nuclear-capable artillery, aviation and other longer-range missiles.



The follow-on to the FROG, the SS-21, has improved accuracy and range. Initial operational capability for the SS-21 was attained in 1976; however, only a few have been deployed.

Until recently, the West relied extensively upon the qualitative superiority of its forces to offset the numerical superiority of the USSR and its allies. That margin of quality is rapidly diminishing in the face of a massive Soviet effort to modernize its forces and those of its Warsaw Pact allies. Modern tanks, armored fighting vehicles, artillery, rocket launchers, anti-aircraft artillery, surface-to-air and surface-to-surface

missiles, and other weapons now being fielded in large quantities are the direct result of an intensive, multi-year Soviet investment program. This program is expected to continue in spite of predicted Soviet economic problems. The Soviet advantage in tanks, presently about three to one in the European theater alone, will grow throughout the decade.

THEATER BOMBERS

BADGER, BLINDER and BACKFIRE aircraft assigned to both Soviet Long Range Aviation and Soviet Naval Aviation could be used to carry out missions covering all of NATO Europe. While the BEAR and BISON bombers also could perform theater roles, they are reserved primarily for intercontinental strike missions. The most notable feature of the theater bomber force is its age: fully three quarters of the aircraft are over ten years old, and only the BACKFIRE remains in production.

These medium bombers have a primary land attack role, intended for either a nuclear or a conventional war scenario. In their nuclear use, the bombers would complement strikes by the Soviets' medium and intermediate range ballistic missiles. The primary objective in either case would be to free the Strategic Rocket Forces to concentrate on highest priority, time-urgent NATO targets.

FRONTAL AVIATION

The Soviet Air Force is separated into three distinct air arms to include: Long Range Aviation, Frontal or Tactical Aviation and Military Transport Aviation.

Frontal Aviation is the largest component of the Soviet Air Force and is organized into Tactical Air Armies consisting generally of fighter, fighter-bombers, transports, helicopters and reconnaissance units as well as miscellaneous support units. Tactical Air Armies are located

in 12 Soviet Military Districts and with the Groups of Soviet Forces in East Germany, Poland, Czechoslovakia and Hungary. These tactical air armies account for some 4,800 fixed wing combat aircraft, 250 transports and 3,500 helicopters.

Since the early 1970s, the introduction of modern aircraft such as the FENCER, FITTER C&D, FOXBAT and FLOGGER has steadily improved the offensive capabilities of Frontal Aviation, turning the Soviets' Tactical Air Forces from a force basically defensively-oriented to one now with significantly enhanced offensive capabilities for theater warfare. These aircraft carry loads of bombs, rockets and guided munitions, 2,000-to-8,000 kilograms in weight, to radii between 350 and 1,500 kilometers. The counterair fighters carry improved air-to-air missiles to ranges in excess of 900 kilometers. These aircraft also incorporate upgraded avionics. The entire counterair and about 75 percent of the ground attack force are

comprised of aircraft introduced in the past decade.

Frontal Aviation possesses five basic aircraft in support of ground force operations.

FLOGGER

Currently 1,400 FLOGGER B/D/G/J are operational in Frontal Aviation.

FLOGGER B/G — all weather counterair fighter

FLOGGER D/J — all weather ground attack aircraft

FLOGGER E — export version of FLOGGER B

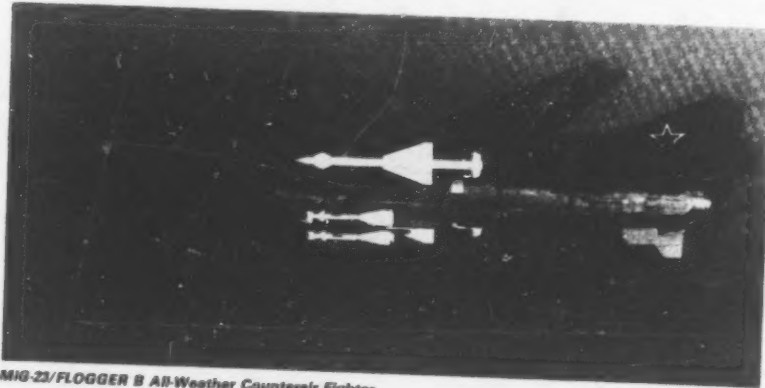
FLOGGER F — export version of FLOGGER D

FLOGGER H — export version of FLOGGER D

Flogger

FLOGGER B/G FLOGGER D/J

Max Payload (kg)	6x AAMs	3,800
Combat Radius (km)	900-1,200	850-900
Service Ceiling (m)	18,000	16,000



MIG-23/FLOGGER B All-Weather Counterair Fighter

FISHBED

Some 1,500 FISHBED can be found in Soviet units, although the FLOGGER is replacing the FISHBED as the standard combat fighter in the Soviet Air Force.

FISHBED E — short-range, clear-air fighter
FISHBED D through N — (except H and M) — all-weather counterair fighters
FISHBED H — reconnaissance platform

	Fishbed	
	FISHBED E	FISHBED L/N
Max Payload (kg)	2x AAMs	4x AAMs
Combat Radius (km)	350-650	550-900
Service Ceiling (m)	17,000	18,000



MIG-21/FISHBED N All-Weather Interceptor

FITTER

There are four ground attack and one reconnaissance variants of the FITTER operationally deployed with Warsaw Pact Forces, with only FITTER A and C in the national air arms thus far.

FITTER A — swept wing clear-air ground attack aircraft (200 operational with Soviet units)
FITTER C/D/H — swing-wing all-weather ground attack aircraft (650 operational in Soviet units)

Fitter

	FITTER A	FITTER C/D/H
Max Payload (kg)	2,000	3,900-4,000
Combat Radius (km)	250-350	950-900
Service Ceiling (m)	15,000	18,000



Su-17/FITTER C Swing-Wing Ground Support Fighter

FOXBAT

Two variants of the FOXBAT are deployed in operational service with Soviet frontal aviation; both are reconnaissance platforms.

Foxbat B/D

Max Payload:	Reconnaissance package only
Combat Radius (km)	1,100
Service Ceiling (m)	27,000



MIG-25/FOXBAT High Altitude Supersonic Interceptor

FENCER

The FENCER, operational since 1974, was the first modern Soviet aircraft designed specifically for a ground attack role and the first to carry a weapons system officer. There are 400 FENCERs operational.

Fencer	
Max Payload (kg)	8,000
Combat Radius (km)	1,800
Service Ceiling (m)	17,500



Su-24/FENCER Ground Support Aircraft

Replacing the old Yak-28/BREWER tactical bomber with the FENCER gives Frontal Aviation the ability to strike targets throughout most of NATO Europe from home bases in the USSR. The addition of this aircraft along with the latest ground attack variants of FLOGGER and FITTER greatly increases the tonnage which can be delivered over a far greater range.

To complement the growing inventory of modern aircraft, the Soviets are developing new types of armament which should greatly increase the effectiveness of sorties against hardened ground targets.

HELICOPTERS

The majority of the Soviet helicopter forces are assigned to Frontal Aviation units to be employed near the forward edge of a battle area.

During the 1950s and early 1960s, Soviet helicopter design and production was limited to medium and heavy lift aircraft intended for use as transports only. During the late 1960s and early 1970s, the Soviets began to experiment with the use of the helicopter in the assault and attack roles. The Soviets installed 128x57 mm rockets on the Mi-8/HIP C to be employed as an assault helicopter. Later, the Mi-8/HIP E was identified. It remains the world's most heavily armed helicopter. The HIP E helicopter has 192x57-mm rockets, four AT-2/SWATTER Antitank Guided Missiles (ATGM), and a 12.7-mm nose gun. The Mi-8/HIP F is an export version of the HIP E with the major change that six AT-3/SAGGER ATGMs replace the four SWATTERs.

While the Mi-8/HIP was undergoing modification to improve its assault capabilities, the

Frontal Aviation Ground Attack Aircraft						
	Su-24 FENCER A	MiG-23 FLOGGER S/G	MiG-27 FLOGGER D/J	Su-17 FITTER D/H	MiG-26 FOXBAT B/D	MiG-21 FISHBED L
METERS						
22						
11						
0						
SPEED (KTS)	540	1,790	540	540	1,825	1,200
RADIUS (KM)	1,800	1,300	1,300	700	900	900
ARMAMENT	2,500 KG Bombs	6 AAMs	2,000 KG Bombs	2,000 KG Bombs	—	4 AAMs
WINGSPAN (M)	10.2 (swept)	8.1 (swept)	8.1 (swept)	9.9 (swept)	13.4	7.3



Mi-24/HIND E with Tube-Launched Anti-Tank Guided Missiles

Soviets were developing the Mi-24/HIND, an attack helicopter and the first Soviet helicopter to be produced that has an integral weapon system and retractable landing gear. The HIND A is armed with 128x57-mm rockets, four AT-2/SWATTER ATGMs, and a 12.7-mm machine gun in the nose. The helicopter also has a small cargo bay that is used to transport up to eight troops. The Mi-24/HIND D is a streamlined variant of HIND A with the pilot seated above and behind the co-pilot/gunner. The 12.7 mm nose gun has been replaced with a turreted Gatling-type gun, but other armament remains unchanged from the HIND A. The latest version



Mi-24/HIND D with Turreted Gatling Gun

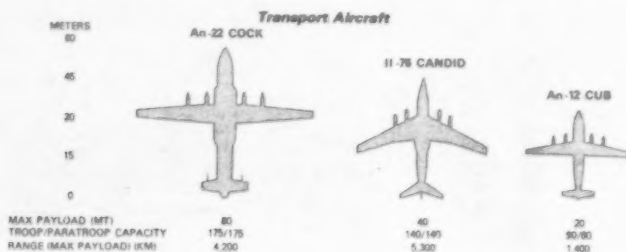
of the HIND E is similar to the HIND D except that it has the tube-launched AT-6/SPIRAL.

TRANSPORT AVIATION

Soviet Military Transport Aviation (VTA) is charged with the primary responsibility for providing airlift services for the Soviet Airborne Troops and air assault brigades.

VTA also operates an air logistics system to supply other deployed Soviet and allied armed forces and to support other Soviet political and economic interests.

Over 600 medium and long-range cargo transports are currently assigned to VTA airlift units. Il-76/CANDID long-range jet transports, which are replacing CUBs, now number over





Il-76/CANDID Long Range Jet Transport

150. Over 50 An-22 COCK long-range turboprop transports are in the VTA inventory. The COCK and CANDID units are based in the western USSR, as are most of the remaining CUB units, although some VTA CUB units are stationed along the southern and far eastern periphery of the Soviet Union. This concentration in the western USSR places the main VTA assets near the airborne divisions they would support, as well as positioning the force opposite NATO. Nevertheless, VTA is capable of quickly concentrating its aircraft to support an operation anywhere along the Soviet periphery, as demonstrated in the December 1979 Soviet invasion of Afghanistan.

The CUB continues to be the mainstay of VTA. It is a four engine turboprop which can carry up to 90-100 troops or cargo up to a maximum payload of 20 metric tons. It first entered VTA in the late 1950s.

In the mid-1970s, CANDID transports were introduced to meet VTA's increasing worldwide airlift requirements. The CANDID is comparable to the U.S. C-141, and can airlift up to 140 troops or 40 metric tons of cargo. Its main asset, however, is its greatly improved radius range over that of the CUB it is replacing. A CANDID can thus theoretically lift twice the payload weight to five times the radius range of the CUB.

During times of military emergency, VTA



An-22/COCK Long Range Turboprop Transport

can call upon the considerable reserve offered by Soviet civil aviation, Aeroflot. The civil fleet is equipped with about 200 CUBs and CAN-DIDs, about 1,100 medium- and long-range passenger transports and several thousand short-range transports and helicopters.

ELECTRONIC WARFARE

The Soviets continue to improve their capability to conduct Electronic Warfare (EW) and Signals Intelligence (SIGINT). Technical advancements in both Electronic Counter Measures (ECM) and Electronic Warfare Support Measures are noted in all Soviet forces. The air forces have numerous aircraft devoted to EW as escort and standoff jammer platforms. Additionally, since 1979, there has been increased emphasis on Soviet offensive, penetrating air forces equipped with ECM and accompanied by dedicated EW aircraft. The USSR has made a major investment in Electronic Counter Countermeasures (ECCM), as well as lethal and nonlethal countermeasures. Ground forces continue to introduce new jammers, as well as a new series of improved SIGINT vehicles. Strategic fixed jammers are located throughout the Soviet Union.

The Soviets have developed their EW capabilities into an integrated system called Radio-electronic Combat, combining all forms of intelligence, direction finding, intensive jamming, deception and suppressive fires from ground, air and seabased platforms to attack enemy organization and systems through their electronic means of control. Its purpose is to limit, delay or nullify the enemy's use of his command and control systems while protecting Soviet systems by ECCM. An estimated goal of the system is to destroy or disrupt a significant proportion of the enemy's command, control and weapon system communications, either by jamming or by destructive fire.

The Soviet ECCM objective is the satisfactory operation of USSR electronic equipment in the face of enemy disruption. Thus, physical protection of the equipment is included as well as other practices beyond the scope of western ECCM. Modern ECCM features have been designed into the newer air defense equipment. The greatest emphasis, however, has been on individual and organizational techniques that can be applied in the field.

To cite one example, the Soviets use anti-radar camouflage to conceal military equipment against detection by ground, airborne and shipborne radars. Depending on the radar visibility of the objects to be camouflaged, anti-radar camouflaging is achieved by the creation of false targets or by blending into the terrain background those objects that might serve for orientation. Equipment may be concealed behind local features or by making use of the camouflaging properties of the ground relief.

In addition to natural cover, timber, brush wood, metallic nets and angle reflectors are used by Soviet forces for radar camouflage. Mockups of military equipment can also be used as antiradar reflectors.

CHEMICAL WARFARE

The armed forces of the Soviet Union in particular and the Warsaw Pact forces in general are better equipped, structured and trained than any other military force in the world to conduct offensive and defensive chemical warfare operations. Their capabilities are steadily improving.

The Soviets have deployed a variety of modern agents and multiple delivery systems, and have the tactical doctrine for large-scale employment of chemical weapons. A significant portion of all Soviet delivery systems—including missile and rocket systems, aerial bombs and artillery—are chemical-weapon capable. War-

saw Pact forces are well-trained, organized and equipped for offensive CW operations.

In Soviet military doctrine, toxic chemicals are associated primarily with theater warfare. The basic principle is to achieve surprise by using massive quantities of chemical agents against unprotected troops or against equipment or on terrain to deny its use.

A large chemical warfare organization is organic to the Soviet service structure. Throughout the Warsaw Pact each combat unit down to regimental level has a sizable contingent for chemical defense. Chemical specialists are also assigned at the company level. All Warsaw Pact combat and combat support forces are well equipped and realistically trained to insure their survivability and to increase their operational effectiveness in toxic environments.

SPECIAL PURPOSE FORCES AND UNCONVENTIONAL WARFARE

In the context of Special Purpose Forces, Soviet unconventional warfare is defined as a variety of military and paramilitary operations including partisan warfare, subversion, and sabotage, conducted during periods of peace and war, and including other operations of a covert or clandestine nature.

The Soviets have used unconventional forces and methods in the past:

- Bolsheviks employed partisan guerrilla units against the Czarists and other opponents during the Russian Civil War of 1917 to 1920.
- Soviet partisan forces were extensively used against the Germans during World War II.
- Special purpose troops were used to crush resistance to Soviet domination over Eastern Europe.
- Soviet special purpose forces were used in the Soviet invasion of Czech-

oslovakia in 1968 to arrest Czech leadership and secure key objectives in Prague.

- Soviet special purpose forces played an important role in the invasion of Afghanistan and the elimination of President Amin.

Soviet unconventional warfare activities are managed at the highest level of government authority. The Committee for State Security (KGB) and the Main Intelligence Directorate (GRU) of the General Staff can be assumed to plan and execute Soviet unconventional warfare operations. These activities are protected by stringent security measures.

The Soviet leadership has a variety of elite forces for conducting unconventional warfare missions: special units of the KGB, GRU, Airborne and Ground and Naval Forces. The KGB special purpose units have a sabotage mission, and are thought to be targeted primarily against the civilian sector. Their tasks would be to create general panic among the civilian population, to disrupt civil government and public utilities, and to damage or destroy key production facilities.

The regular Soviet Armed Forces maintain elite airborne units, special sabotage/reconnaissance units and special long-range reconnaissance units for missions. The most powerful and numerous are the airborne troops under the direct control of the General Staff in Moscow. Some of these airborne units are designated as "special purpose" troops and are intended to operate in small groups against key political, military, command and control, transportation and industrial targets in the enemy rear area.

Soviet unconventional warfare units receive very intensive training. Small groups of men are trained as teams. Each team has an officer in charge who speaks the language of the target country fluently; a senior sergeant serves as sec-

ond in command. Other members of the group are trained as radio operators, weapons and demolition experts. In addition to the normal military training, the following special skills are emphasized:

- tactics of infiltrating and exfiltrating the target area
- night operational linkups
- sabotage methods using explosives, incendiaries, acids and abrasives
- parachute training
- clandestine communications
- hand to hand combat and silent killing techniques
- language/customs of target country
- survival behind enemy lines
- identifying and locating targets.

To make training as realistic as possible, the Soviet training centers are equipped with realistic models of key targets such as enemy facilities and weapon systems.

Soviet writings point out the effectiveness of UW units and record the accomplishments in World War II:

"During the war the partisans killed, wounded or took prisoner hundreds of thousands of German troops, collaborators and officials of the occupation administration. They derailed more than 18,000 trains, and destroyed or damaged thousands of locomotives and tens of thousands of railway cars and cisterns. The partisan war affected the morale of the German Army, keeping the German troops in a constant state of fear."

Use of unconventional warfare is a basic element of Soviet doctrine, and Soviet capabilities in this respect constitute a formidable threat.

THE SOVIET NAVY

Over the last two decades the Soviet Navy has been transformed from a basically coastal defense force into an ocean-going force designed

Major Surface Ships



to extend the military capability of the USSR well out to sea and to perform the functions of tactical, theater and strategic naval power in waters distant from the Soviet Union. The Soviets have a larger array of general purpose submarines, surface warships and combat naval aircraft than any other nation. The submarines, about 70 of which carry antisub cruise

missiles, constitute the most serious threat to US and Allied naval forces and the worldwide sea lines of communication upon which we and our Allies depend. In the mid-1960s the Soviets had 260 major surface warships and amphibious ships. Today they have 362.

In the European theater, Soviet naval forces would have a variety of key missions. These would include securing vital areas of the sea and strategic passages such as the waters north of the Greenland/Iceland/United Kingdom Gap, the Gap itself, the Baltic Sea, the Gulf of

Finland, the passages on either side of Denmark, the Bosphorus and Dardanelles and the Mediterranean Sea. Additionally, the Soviet Navy would seek to interdict the sea lanes to Europe, and would mount operations on the high seas against NATO carrier task forces, other surface warships and submarines.

The largest Soviet surface warship is the KIEV-Class aircraft carrier. At present, two KIEVs are deployed and two more are under construction. The KIEVs are armed with anti-ship cruise missiles, antisubmarine and over-

Soviet Navy Order of Battle

Submarines - Nuclear Powered

*SSBN	Ballistic Missile Submarines (YANKEE, DELTA classes)	62
SSBN	Ballistic Missile Submarines (HOTEL class)	7
*SSGN	Cruise Missile Submarines	53
*SSN	Torpedo Attack Submarines	80

Submarines - Diesel-electric Powered

SSB	Ballistic Missile Submarines	18
SSG	Cruise Missile Submarines	20
*SS	Torpedo Attack Submarines	160

Aircraft Carriers and Aviation Cruisers

CVHG	VSTOL Carriers (KIEV class)	3
CHG	Aviation Cruisers (MOSKVA class)	2

Cruisers

*CGN	Guided Missile Cruiser (Nuclear) (KIROV class)	1
*CG	Guided Missile Cruisers (SAM/SSM)	38
CL	Light Cruisers (SVERDLOV class)	9

Destroyers

*DDG	Guided Missile Destroyers (SAM/SSM)	36
DD	Destroyers	30

Frigates (Escort)

*FFG	Guided Missile Frigates (KRIVAK class)	28
*FF/FFL	Frigates / small frigates	140

Small Combatants

*Mistral Craft	.....	148
*Patrol / ASW / Torpedo Craft	.....	306
*Minesweepers	.....	306

Amphibious Ships

*LPD	Amphibious Assault Transport Dock (IVAN ROGOV class)	1
LST	Amphibious Vehicle Landing Ships (ALLIGATOR, ROPUCHA classes)	25
LSM	Medium Landing Ships (POLNOCHNY / MP 4 classes)	60

Auxiliary Ships

*Mobile Logistics Ships	.....	150
*Other Auxiliaries	.....	606

* Indicates additional units under construction in these categories.

the-horizon target acquisition helicopters, anti-aircraft missiles, anti-submarine rockets and missiles, believed to be nuclear-capable, and the FORGER vertical- and short-takeoff and landing (VSTOL) jet aircraft.

The principal surface warships which the Soviets are building today have greater range, firepower and electronics capabilities than in the past. The modern ships of the Soviet Navy are among the fastest and most heavily armed in the world.

Present surface warship building programs include about 12 hulls under construction in four new classes of large warships, including a 23,000-ton nuclear-powered cruiser as well as the continued construction of KIEV-Class carriers and destroyer and frigate classes. The Soviet Navy has led the world in the use of cruise missiles in naval warfare. Since the installation of the SS-N-1 cruise missile on the KILDIN and KRUPNYY classes of destroyers in the late 1950s, the Soviets have extensively developed and deployed this type of weapon.

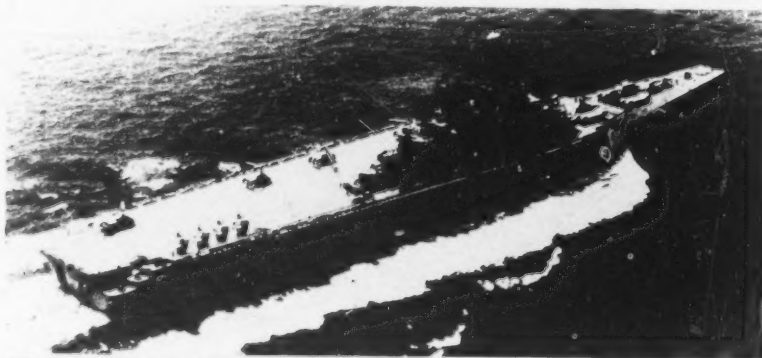
Today the Soviet Navy has some 20 cruisers, carriers, and destroyers, about 70 submarines and 300 land-based aircraft armed with anti-ship cruise missiles.

AIRCRAFT CARRIERS

The widely publicized KIEV-Class aircraft carriers are the largest warships ever completed by the Soviet Union.

With the commissioning of KIEV in 1976, the Soviets, for the first time, have seabased, fixed-wing aircraft in operation. The second KIEV-Class ship, MINSK, is now in the Pacific Ocean Fleet, a third carrier is fitting out, and a fourth is under construction. A logical advance on the KIEV design could be a nuclear-powered carrier of about 60,000 tons with catapults and an air wing of some 60 aircraft. Such a ship could join the fleet late in this decade.

The KIEVs have an unusual design. They have a full load displacement of about 37,000 tons, are 270 meters long, have an angled flight deck some 185 meters long and an island super-



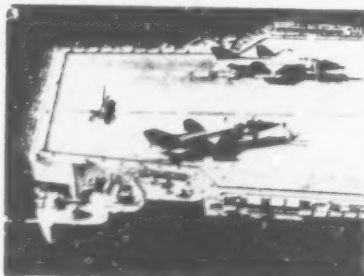
KIEV, Lead Ship of the KIEV-Class Guided Missile VSTOL Aircraft Carriers



In this view from astern, the nuclear-powered guided missile cruiser KIROV reveals a superstructure massed with radars and electronic sensors, a stern door for ASW sensors, helicopter deck bordered by Gatling guns and 100mm dual purpose gun mounts.

structure to starboard in the tradition of Western carriers. However, the forward part of these ships is similar to Soviet missile cruisers, with antiship, antisubmarine and antiaircraft missile launchers. They also have a profusion of more traditional weapons, electronic warfare systems, and a number of advanced communications devices.

The lack of aircraft arresting wires and catapults on the flight deck limits the ships to helicopters and VSTOL aircraft. A mix of about 20 Ka-25/HORMONE helicopters and 15 Yak-36/FORGER VSTOL aircraft is a nominal air group, although this mix could be changed to meet varied mission requirements.



Yak-36/FORGERs on KIEV-Class Carrier

Although the primary mission of the KIEV Class is stated by the Soviets as antisubmarine warfare, the ships also have powerful antiship capability in their cruise missile battery. They have eight large launching tubes with reloads for SS-N-12 missiles, which are an improvement over the older SS-N-3 antiship missiles. The HORMONE B helicopter, capable of providing over-the-horizon targeting information for the SS-N-12/SANDBOX missiles which have a maximum range of some 550 kilometers, has been seen aboard the KIEV Class.

KIEV is a second generation class of Soviet "aviation ship," following the helicopter carrier missile cruisers MOSKVA and LENINGRAD, which were completed in 1967 and 1968, respectively. These earlier ships also were of innovative design, being essentially missile cruisers forward with a clear flight deck aft for the operation of up to 18 HORMONE antisubmarine helicopters. The latter ships are rated as "antisubmarine cruisers" by the Soviet Navy and have been used primarily in that role as well as serving as flagships.

SURFACE COMBATANTS

In May 1980 the Soviets began sea trials of their first nuclear-powered surface combatant, the guided missile cruiser KIROV. This is a ship of 25,000 tons, larger than any surface combatant other than an aircraft carrier built since World War II. Its primary armament is heavy, new generation, highly sophisticated surface-to-air and long-range antiship cruise missiles. The Soviets have also fitted her with ASW missiles, two 100-mm dual purpose guns, short-range surface-to-air missiles, Gatling guns for close-in defense, and Ka-25 HORMONE ASW helicopters.

KIROV is designed to provide improved fleet air defense against attack from Western aircraft carriers or from long-range cruise missiles. Conversely, the KIROV's new long-range, antiship cruise missiles will significantly enhance Soviet abilities to strike opposing surface action groups. KIROV marks an important developmental step in the technical evolution of Soviet sea power. A second unit is well along in construction.

In July 1980, the Soviets began sea trials of their second new class of major surface combatant in 1980, the 7,000-to-8,000-ton, steam-powered, guided missile destroyer (DDG) SOVREMENNY. While KIROV is clearly a multipurpose ship, SOVREMENNY appears



UDALOY, Guided Missile Destroyer

primarily designed for antisurface warfare with four 30-mm Gatling guns, surface-to-surface antiship cruise missiles, and new, medium range, surface-to-air missile systems. The SOVREMENNY has a secondary ASW mission and can carry HORMONE variant helicopters in its telescoping hangar. This new DDG is the first gun ship constructed by the Soviets since the late 50s and is their first major combatant since 1970 to deploy without significant ASW capability. It is now in series production with additional units expected through the mid-1980s. Ships of the SOVREMENNY Class can be expected to support amphibious assault forces, provide naval gunfire, and oppose Western air, surface and submarine forces in all ocean areas.

In November 1980, the Soviets began sea trials of still another new class of mission-specific guided missile destroyer, the UDALOY. This unit is designed primarily for antisub-

marine warfare, displaces about 6,000 to 9,000 tons, is armed with eight ASW missiles, two 100-mm guns, four Gatling guns for close-in defense and two hangars for ASW helicopters. The UDALOY appears to be a follow-on class to previous Soviet large antisubmarine ship programs and probably will be employed as the main ASW platform within an integrated Soviet task force. All available evidence suggests that the UDALOY program will be a large-scale effort with a number of units to be deployed through the 1980s.

Finally in 1980, a fourth major surface combatant program was identified in the Soviet Union. This new class of large, conventionally powered, multipurpose guided missile cruiser is being constructed in the Black Sea and has been temporarily designated "BLACK-COM-1." This new cruiser has supplanted KARA-class cruiser construction and will probably carry long-range cruise missiles. The new ship displaces approximately 11,000 to 13,000 tons and is further evidence of the Soviet trend toward larger, more technically sophisticated combatants. Although BLACK-COM-1 is conventionally powered, it is expected to function like KIROV as a multipurpose command ship capable of providing a Soviet battle group with enhanced air defense and surface strike capabilities. Series production of this new class is already underway.



KIROV, Nuclear-Powered Guided Missile Cruiser



SOVREMENNYI, Guided Missile Destroyer

SUBMARINES

The Soviet Navy currently operates some 377 submarines, including 180 nuclear-powered submarines compared to some 115 in the U.S. Navy.

Attack Submarines: The Soviet Navy operates about 220 attack submarines. Most are diesel electric powered and many are of recent construction. About 60 of the torpedo attack submarines are nuclear powered, being of the NOVEMBER, ECHO, VICTOR, and ALFA

Classes. The last is believed to be the fastest submarine in service today in any Navy. An improved VIKTOR Class is now in production and the small, ALFA Class, which combines deep-diving capabilities with its high speed, may well be in series production. The Soviet Navy continues to build diesel-powered submarines, the FOXTROT Class, for overseas sales, i.e., India, Libya and Cuba, and the new TANGO Class for use by the Soviet Navy. The prime weapons of these attack submarines are antisubmarine



VIKTOR I-Class Nuclear-Powered Attack Submarine



ECHO-Class Nuclear-Powered Attack Submarine

and antiship torpedoes; however, mines also can be carried. The newer submarines have rocket-delivered ASW weapons as well.

Cruise Missile Submarines: Even while ambitious surface combatant construction programs were underway, the Soviets continued to turn out submarines at virtually the same pace they have maintained through the 1970s. One new class introduced in 1980, the OSCAR, is an extremely large SSGN capable of launching up to 24 long-range, antiship cruise missiles while remaining submerged. The missile fired by the OSCAR is probably a submarine variant of the same new antiship cruise missile first deployed aboard KIROV. This missile has an estimated range of over 450 kilometers. The Soviets began their submarine cruise missile programs in the 1950s converting existing submarines to fire the

long-range SS-N-3 missile. Then, newer submarines designed to carry the SS-N-3 joined the Soviet fleet, the diesel-powered JULIETT Class and the nuclear-powered ECHO I and II Classes.

After producing about 50 submarines of the JULIETT and ECHO Classes, the Soviets completed the first CHARLIE I Class SSGN in 1968 with the improved CHARLIE II following several years later. These nuclear-powered submarines can fire eight antiship cruise missiles while remaining submerged at a range of up to 100 kilometers from the intended target. Soviet cruise missile submarines also carry ASW and antiship torpedoes.

The Soviet Navy's cruise missile submarines and their missile-armed bombers form the greatest threat to Allied naval surface forces

operating on the high seas. This is especially so when within range of Soviet air bases where the Soviets can launch coordinated attacks using not only reconnaissance aircraft to provide target data for submarine-launched missiles, but also their extensive force of naval and air force missile-equipped bombers.

NAVAL AVIATION

Soviet Naval Aviation is subordinate to the Soviet Navy, with regiments being assigned to each of the four fleets under an aviation officer reporting directly to the fleet commander. Soviet Naval Aviation consists of some 1,440 aircraft, most of which are based ashore except for helicopters assigned to various cruisers and the helicopters and VSTOL aircraft that fly from the KIEV-Class aircraft carriers.

Soviet Naval Aviation has four basic missions: reconnaissance and surveillance, antiship strike, antisubmarine and aviation support.

Naval aircraft are employed in long-range reconnaissance and ocean surveillance, with some aircraft equipped to provide midcourse target data for antiship missiles launched "over the horizon" from surface ships, submarines, and other aircraft. Reconnaissance aircraft now in use include about 50 of the larger Tu-95/BEAR D turbo-prop planes; about 100 twin-jet Tu-16/BADGER aircraft, and Tu-22/BLINDER jet aircraft that have a supersonic dash speed. Additionally, the Il-38/MAY maritime patrol aircraft are used for surveillance and reconnaissance missions.

The prime strike force of Soviet Naval Aviation consists of over 300 twin-jet BADGER and BLINDER aircraft which are fitted to carry one or two of several types of antiship cruise missiles with "standoff" ranges varying from 90 to over 300 kilometers. Some missiles have variable flight paths and various homing techniques to

Soviet Navy Aircraft

Strike/Bombers	390
BACKFIRE	
BADGER	
BLINDER	
Fighter/Fighter Bombers	70
FITTER	
FORGER	
Reconnaissance/Electronic Warfare Aircraft	180
BADGER	
BEAR D	
BLINDER	
Antisubmarine Aircraft	400
BEAR F	
HAZE A	
HORMONE A	
HOUND	
MAIL	
MAY	
Tanker	70
BADGER	
Transport/Training Aircraft	330

help penetrate ship defenses. All these missiles are assessed to carry either a nuclear or a high explosive warhead of about 1,000 to 2,000 pounds (450 to 900 kilograms).

Soviet Naval Aviation also flies the twin-jet BACKFIRE, a supersonic aircraft with variable-sweep wings. This plane carries stand-off missiles and is slowly replacing the BADGER in strike squadrons. The Navy is receiving this aircraft at about the same rate as the Soviet Long Range Aviation strategic bombing force and



Su-17/FITTER Fighter-Bomber

the inventory has climbed to more than 70 aircraft. The BACKFIRE greatly increases the capability and extends the range at which strike aircraft can attack Western surface forces such as aircraft carrier or amphibious battle groups.

The introduction of aircraft carriers and FORGER aircraft gives Soviet Naval Aviation another dimension of antiship strike. The FORGER can be fitted with short-range air-to-surface missiles, rockets, or bombs for use against ship or shore targets.

The FITTER fighter-bomber has been introduced into Soviet Naval Aviation over the last several years. These aircraft are assigned to the Baltic Fleet primarily to provide antiship strike and support to amphibious operations in the Baltic.

In addition to naval aircraft armed with antiship missiles, certain BEAR and BADGER bombers of Soviet Long Range Aviation can be

used for attacks against ships, and these aircraft regularly participate in naval exercises. Most of these strike aircraft can be refueled in-flight by naval BADGERs fitted as tankers as well as by Long Range Aviation tankers.

For antisubmarine warfare the Soviet Navy has a force of about 400 fixed-wing aircraft and helicopters configured for submarine detection and attack. This force currently includes BEAR F aircraft, MAY turbo prop aircraft and MAIL, twin-engine flying boat aircraft. Only the BEAR F appears to be still in production. These aircraft operate from Soviet land bases to search out seaward areas for foreign submarines.

An increasing number of antisubmarine helicopters are being flown by the Soviet Navy. The HORMONE A, a twin turboshaft helicopter, is flown from the newer Soviet cruisers, as well as from the helicopter carriers MOSKVA and LENINGRAD and the KIEV-Class aircraft

carriers. Additionally, an ASW version of the Mi-14/HAZE helicopter flies from land bases.

Soviet Naval Aviation also operates some 125 transport and utility aircraft of various types. Although basic and advanced training are provided by the Soviet Air Forces, maritime operational training is accomplished within the Navy. Soviet Naval Aviation retains a number of transports to provide a logistics capability better to meet the Navy's priority needs.

AMPHIBIOUS FORCES

Another area of continuing development in the Soviet Navy has been the amphibious assault forces. In April 1980, the recently constructed IVAN ROGOV, the Soviets' newest amphibious warfare ship, deployed to the Indian Ocean. At about 13,000 tons, the IVAN ROGOV is nearly three times the size of previous Soviet amphibious ships and is designed to operate both helicopters and high-speed air-cushioned landing craft. The ROGOV can embark about 550 naval infantry troops and significantly enhances Soviet amphibious warfare projection to distant areas, especially the Third World.

Amphibious lift for the naval infantry is provided primarily by IVAN ROGOV-Class LPDs, ALLIGATOR-Class and ROPUCHA-Class LSTs, and POLNOCNY-Class LSMs. The Soviet amphibious forces exercise regularly in their respective fleet areas and regularly deploy to the Mediterranean, off West Africa, and the Indian Ocean. The Soviet Navy has about 25 LSTs and some 60 LSMs, plus numerous lesser landing craft and air-cushion vehicles for amphibious operations.

The Soviet Navy is now the world's largest operator of military air-cushion vehicles for which development continues. There are three classes currently in use: the GUS, LEBED and large AIST Class.

Although small by comparison to the U.S. Marine Corps, the Soviet Naval Infantry is the second largest marine force in the world. The potential power of even a few hundred Soviet marines afloat during a crisis provides the Soviet Union with a valuable political-military instrument.

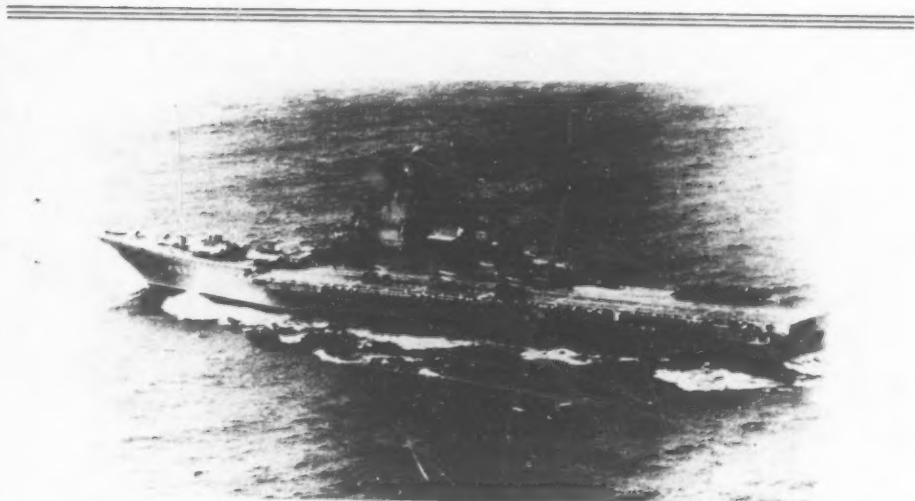
The Soviets have in hand, or are developing, the elements necessary to provide a formidable



IVAN ROGOV, Lead Ship of a New Amphibious Assault Class



The 12,600-ton amphibious assault transport ship *IVAN ROGOV* entered service in 1976, the largest amphibious ship in the Soviet Navy. *IVAN ROGOV* has two helicopter decks and helicopter hangars, and a floodable welldeck, behind the large stern gate, which can carry three air-cushion landing craft. Judging by *IVAN ROGOV*'s characteristics, the amphibious ship can carry a Soviet Naval Infantry Battalion—550 men—30 armored personnel carriers and ten tanks, enhancing the USSR's capability to project naval and military power at great distances from the Soviet homeland.



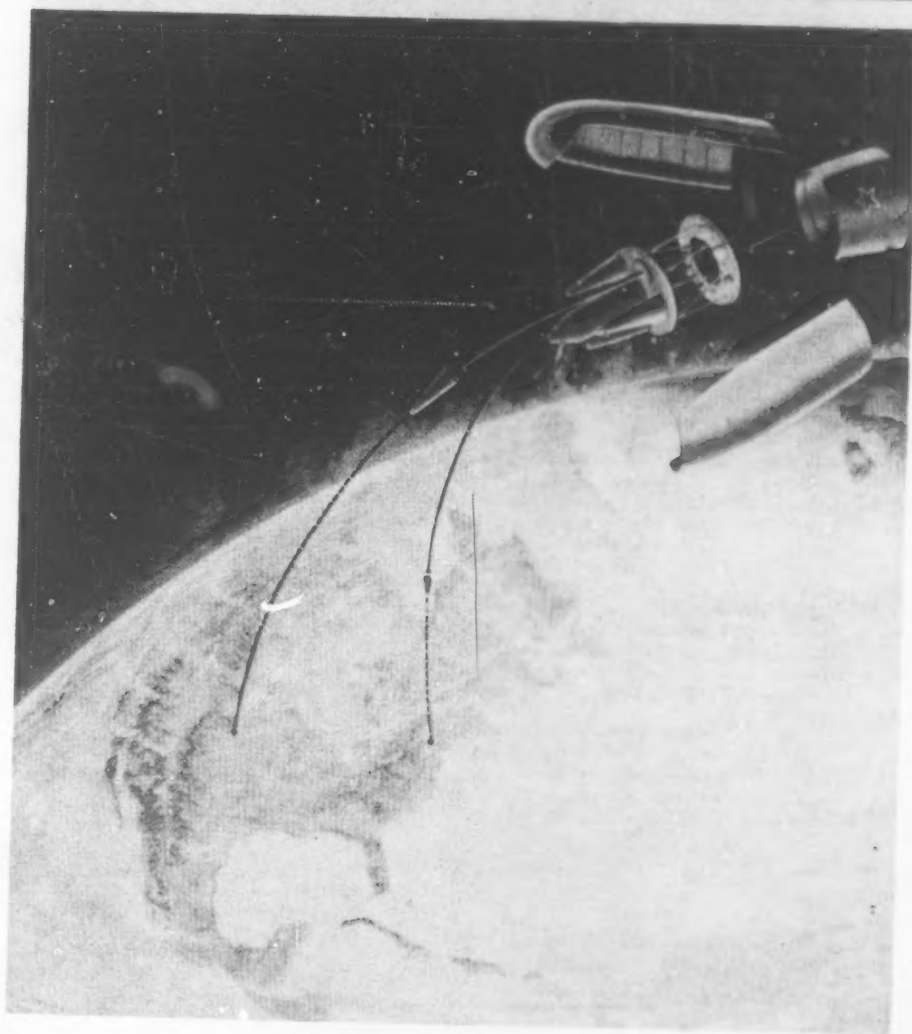
MINSK, Second of the KIEV-Class VSTOL Aircraft Carriers

projection into distant waters. These include the improvement in assault lift capability, the expansion of a large administrative lift ability designed into certain ships of the Merchant Marine, the retention of a substantial gunfire support strength in cruisers and destroyers, development of sea-based tactical air power, and an improving underway replenishment capability. The Soviet Navy's ability to project tactical power ashore at some distance from the Soviet littoral may be part of Admiral Gorshkov's grand plan of achieving a "balanced fleet."

Soviet naval policy and programs for the 1980s can be expected to be directed toward broadening the range of military and political options available to the leadership across the entire spectrum of conflict—from competition

in peacetime to hostilities in the event of a nuclear war. Having achieved rough parity in general war capabilities, the Soviets can be expected to increase their emphasis on making general purpose naval forces more capable in distant waters, of performing a variety of missions and of challenging the West's traditional dominance of the open oceans. We believe that Soviet naval policies also intend gradually to achieve greatly improved capabilities for sustained, long-range naval operations, even against substantial opposition.

V SOVIET STRATEGIC



FORCES



Over the past 20 years, the Soviet Union has devoted substantial resources to the development and deployment of intercontinental ballistic missile (ICBM) and submarine launched ballistic missile (SLBM) forces. Fewer resources have been allocated to bomber forces, although new weapons systems—primarily the BACKFIRE bomber—have been deployed.

Under Brezhnev, the Soviet missile forces have moved from a position of clear inferiority in the early-to-middle 1960s to one in which they are generally recognized as equal or superior in certain measures to those of the West. In 1964, the Soviets had only a few operational SLBMs, many of which had to be launched from surfaced submarines. While the USSR had more ICBMs than SLBMs, the number was significantly fewer than US ICBMs. Moreover, the majority of Soviet ICBMs were inaccurate systems housed in launchers that were clustered together and unhardened, making them vulnerable to attack. The USSR then embarked on high-priority development and deployment programs first focused on increasing single-silo ICBM deployment to a level greater than that of the United States. A similar buildup of SLBM launchers on modern, nuclear-powered ballistic missile submarines (SSBNs) was underway by the late 1960s. These massive 1960s ICBM and SLBM deployment programs, largely centered on the SS-9 and SS-11 ICBMs and the SS-N-6/YANKEE SLBM/SSBN weapons systems, provided the foundation from which subsequent strategic nuclear modernization programs were to grow.

Since the mid-1970s the Soviet Union has completely upgraded its strategic intercontinental Ballistic Missile force with the introduction of the SS-17, SS-18 and SS-19, equipped with multiple, independently targetable reentry vehicles—missiles with improved reliability, range, payload accuracy and survivability.

The 1970s modernizations, which only now are reaching a conclusion, were largely technological in nature. More than half of the 1,398 Soviet ICBM launchers have been rebuilt to house the SS-17, SS-18 and SS-19 ICBMs in vastly more survivable, hardened silos. These ICBMs, all of which are MIRVed, are in the forefront of ICBM technology. Certain versions of the SS-18 and SS-19 are among the most accurate ICBMs operational anywhere. Together, these systems have the capability to destroy a large percentage of the more than 1,000 US ICBM launchers, using only part of their total numbers.

The Soviet SLBM/SSBN modernizations began in the early 1970s with the introduction of the long-range SS-N-8 SLBM deployed on DELTA-Class SSBNs. By the late 1970s, the Soviets were producing the MIRVed SS-N-18 and deploying it in a modified version of the DELTA-Class submarines. In 1979, a new SLBM, the MIRVed SS-NX-20, was first tested. This SLBM will probably reach operational status by the mid-1980s, deployed in the new TYPHOON-Class SSBN submarine.

These technological advances in ICBM and SLBM weapons systems have been accompanied by major improvements in communications systems and in the organization of the forces as well.

Soviet intercontinental bomber forces retain most of the BEAR and BISON bombers and refueling tankers which were initially produced in the 1950s and 1960s. Improvements to their avionics and weapons systems have been made, however. Since the early 1970s, the USSR has also deployed over 70 BACKFIRE bombers to operational LRA units and is producing about 50 more of these supersonic bombers each year. While BACKFIRE appears to have been given primarily theater and maritime missions, it has a strategic capability and cannot be ignored as

a potential intercontinental bomber threat.

Current force levels of Soviet intercontinental strategic nuclear forces include 1,398 ICBM launchers, 950 SLBM launchers and 156 long-range bombers, excluding BACKFIRE. These delivery systems are loaded with some 7,000 nuclear warheads. Deployment programs now underway indicate that the number of warheads will increase over the next few years.

STRATEGIC ROCKET FORCE

The Strategic Rocket Force (SRF), the largest missile force in the world, controls all Soviet military units in the Soviet Union equipped with ICBMs, IRBMs and MRBMs. The mission of the SRF is to destroy an enemy's means of nuclear attack, military-industrial production facilities, civil and military command and control capabilities and logistics and transport facilities. The SRF's secondary mission is to support tactical joint forces and naval fleets.

Soviet strategic operational employment plans, based on Soviet writings, point to seizing the initiative through preemptive attack. Such an attack would effectively reduce the impact of a retaliatory strike, limiting damage to the USSR. While this is the preferred Soviet scenario, the Soviets also have the capability to launch on tactical warning if necessary. Regardless of how a war started, the Soviets view the nuclear forces and command and control of an enemy as their first priority targeting objectives. This would include such targets as ICBM launch silos, launch control facilities, support and maintenance facilities, strategic bomber bases, submarine berths and loading facilities and nuclear storage and production facilities. Priority two targets would be those that would negate the ability to project military power abroad. Such targets would include depots, transportation centers, military stockpiles, conventional force bases and training centers. Other targets

would be those that limit the capacity of the enemy to conduct a protracted war such as military industries, refineries and electrical power plants.

The SRF is under the command of General of the Army Tolubko. He is responsible for the administrative and technical control of the forces and equipment under his command. The General Staff of the Ministry of Defense has the responsibility for executing operational decisions of the Supreme High Command which affect the SRF. In addition, the General Staff can bypass the SRF headquarters and exercise direct operational control of the missile forces. Organization within the SRF is based on army, division, regiment, battalion, and battery. A battery consists of single ICBM, IRBM, and MRBM launchers.

The ICBM force of the SRF is deployed in missile complexes generally located along, and with access of, the Trans-Siberian Railway. A typical ICBM complex includes a main base support area, a facility for transferring missiles and equipment from rail to roads, and launch control centers, each with a group of launch silos it controls. Each complex is comprised of a number of launch groups. Each launch group is comprised of either six or ten launch silos.

ICBM DEPLOYMENT

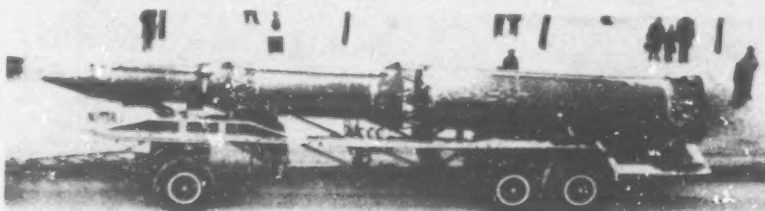
The Soviet ICBM force currently consists of 580 SS-11s, 60 SS-13s, 150 SS-17s, 308 SS-18s, and about 300 SS-19s. The great majority of the 17s, 18s and 19s are equipped with MIRVs. The Soviets are expected to complete their current ICBM modernization program (SS-17, SS-18 and SS-19) in the early 1980s.

Soviet ICBM Deployment

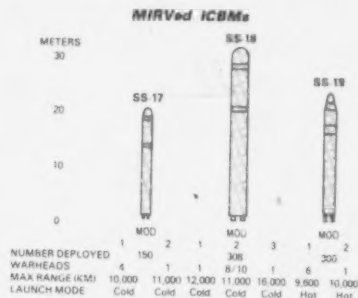


SOVIET MIRVed ICBMs

SS-17: Since it first became operational in 1975, the SS-17 has been deployed in 150 converted SS-11 silos. Both single and multiple re-entry vehicle (RV) versions of the SS-17 have been developed, but few if any of the single RV versions are deployed. The maximum range of



At present, there are 1,386 intercontinental ballistic missile launchers in the Strategic Rocket Force. An SS-17 is seen here during public display in Moscow.



the SS-17 is believed to be about 10,000 kilometers. Although much more accurate than its predecessor, the SS-11, the SS-17 is not as accurate as the SS-18 and SS-19 ICBMs.

The SS-17 employs a cold-launch technique which delays main engine ignition until the missile has exited its hardened silo. This technique minimizes launch damage to the silo and is consistent with the notion of building in the capability to reload and refire missiles during a protracted nuclear conflict.

SS-18: The SS-18, the largest of the current Soviet ICBMs, is similar in dimensions to the SS-9, which it replaced, and is about twice the size of the proposed US MX missile. Like the SS-17, the SS-18 also uses a cold-launch technique. Both single and MIRVed versions of the SS-18 have been tested. The MIRVed versions carry eight or ten reentry vehicles. Each warhead of the ten RV variants has a better than 50 percent chance of destroying a MINUTEMAN silo. When used in pairs against a single target, the warheads are even more destructive. The single RV versions of the SS-18, with their large destructive power and accuracy, are capable of destroying any known

fixed target with high probability.

SS-19: The SS-19 ICBM became operational in 1974. It uses a hot-launch technique with engine ignition occurring while the missile is in its silo. The SS-19 is estimated to have three-to-four times the payload carrying capacity of the SS-11, and the missile is much larger in volume, comparable in size to the proposed US MX. There are both single and multiple RV versions of the SS-19. The MIRVed version, which makes up most of the SS-19 force, is believed capable of delivering six RVs to a range of about 9,000 kilometers.

ICBM RELOAD CAPABILITY

The Soviets could have contingency plans for reloading and refiring missiles from ICBM launchers which already have fired an initial round. The cold-launch technique employed by the SS-17 and SS-18 lends itself to such a capability in a protracted nuclear conflict. Additionally the Soviets may be able to reconstitute a portion of their hot-launched missile force—SS-11, SS-13 and SS-19—as well. The Soviets probably cannot refurbish and reload silo launchers in a period less than several days—thereby avoiding violation of the SALT II Agreement which precludes a rapid reload capability for ICBM launchers.

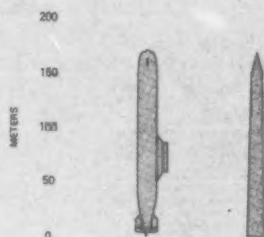
ICBM PRODUCTION

Four major Soviet design bureaus specialize in strategic missiles development. These bureaus are supported by activities at main assembly plants, at hundreds of component production plants, at test ranges, and at launch complexes. The Soviet missile development program shows no signs of slackening. We expect improvements leading to new missiles and to the modification of existing missile systems. These improvements are expected to continue the trend towards greater capabilities against such hard-

ened military structures as ICBM silos. As the accuracy of future Soviet missiles increases, it will be feasible for the Soviets to reduce the size of individual RVs and thereby to increase the number of MIRVs carried on each missile, assuming no external constraint such as that imposed by arms limitations. It is anticipated that the Soviets will develop solid-propellant ICBMs to supplement or replace some of the current liquid propellant systems. The SS-16, a small ICBM about the same size as the MINUTEMAN, is a solid-propellant ICBM which was developed by the Soviets in the early 1970s for mobile deployment. The system was never deployed. Future solid-propellant ICBM development and deployment could give the Soviets additional flexibility in handling and in basing their missile forces. Future missiles are expected to include upgraded versions of the present systems as well as new missiles.

SLBM FORCE

The Soviets continue to expand and modernize their SLBM force, now consisting of some 62 submarines carrying 950 modern SLBMs with a total of almost 2,000 nuclear warhead reentry vehicles. In the past seven years, the USSR has produced 30 SSBNs, and the new 20-tube, very



Length of TYPHOON Compared to Height of Washington Monument

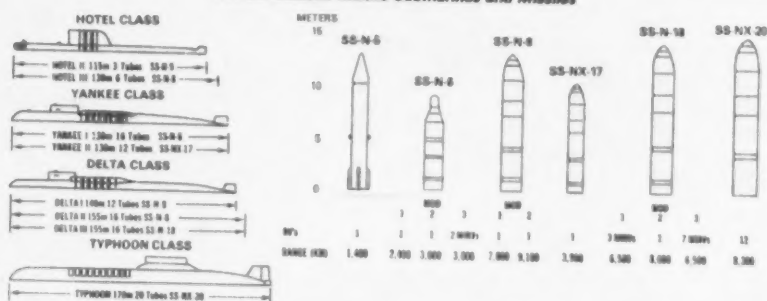
large TYPHOON SSBN was launched in 1980. This new SSBN/SLBM system will be operational in the mid 1980s and is expected to include the SS-NX-20 missile. The SS-N-8 and SS-N-18 on DELTA-Class SSBNs permit the Soviets to hit targets in the United States from their home ports, and it is possible that the Soviets will develop follow-on SLBMs for these as well as the SS-N-6 on the YANKEE SSBNs.

The Soviet effort leading to this current capability began with the conversion of existing diesel-powered submarines in the mid-1950s to fire



YANKEE-Class SSBN

Nuclear Ballistic Missile Submarines and Missiles



short-range ballistic missiles. In the early 1960s, the GOLF Class diesel and HOTEL-Class nuclear-powered ballistic missile submarines were completed.

By the end of 1974, the Soviet Navy had 34 YANKEE-Class SSBNs in service, each carrying 16 nuclear-tipped missiles. During 1975, following the signing of SALT I, the first of the larger DELTA Class submarines was completed. The early DELTAs displace some 11,000 tons submerged and have an overall length of about 140

meters. The modern deployed strategic Soviet SLBM/SSBN force includes the SS-N-18/DELTA III weapon system.

SS-N-6/YANKEE I: The SS-N-6/YANKEE I weapon system is composed of the liquid-propellant SS-N-6 missile and the 16-missile tube YANKEE I-Class SSBN submarine. The SS-N-6/YANKEE I weapon system became operational in 1968. There are different versions of the SS-N-6 SLBM. One version carries a single RV and has a maximum operational range



DELTA I-Class SSBN

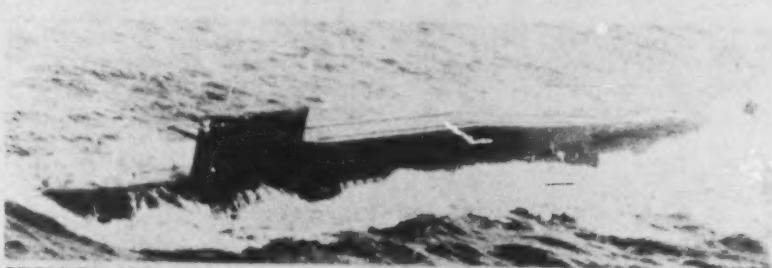
of about 2,400 to 3,000 kilometers. Another version carries two RVs and was the first Soviet SLBM to carry multiple RVs. This SS-N-6 has a maximum operational range of about 3,000 kilometers.

SS-N-8/DELTA I and II: The SS-N-8/DELTA weapon system includes the long-range, two-stage, liquid-propellant SS-N-8 SLBM and the 12-missile tube DELTA I and 16-missile tube DELTA II-Class SSBN submarines. The SS-N-8 was a significant change from previous Soviet SLBMs, even though liquid-propulsion technology was employed, because this was the first two-stage SLBM. The

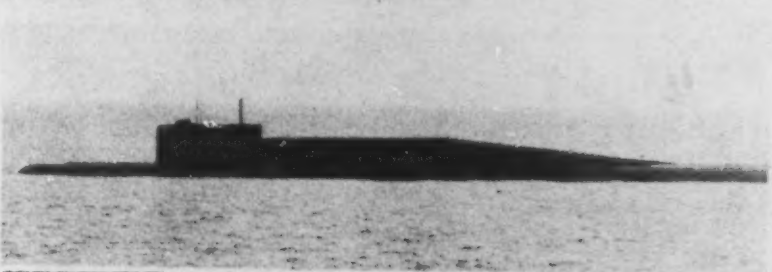
SS-N-8 has a maximum operational range of about 9,000 kilometers and carries one RV.

SS-N-18 DELTA III: The SS-N-18/DELTA III weapon system is composed of the SS-N-18 two-stage, liquid-propellant SLBM and the 16-missile tube DELTA III-Class SSBN.

The SS-N-18 is the first Soviet SLBM to demonstrate a MIRV capability. Its maximum operational booster range is about 6,500 to 8,000 kilometers depending on the payload configuration. Greater range is possible if the SS-N-18 post-boost vehicle, or small third stage, is used to push the payload further along its trajectory, in addition to maneuvering to place reentry



DELTA II-Class SSBN



DELTA III-Class SSBN

Long-Range Strike and Support Aircraft

METERS					
48					
36					
24					
12					
0					
	Tu-96 BEAR	M-TYPE BISON	BACKFIRE B	Tu-16 BADGER	Tu-22 BLINDER
UNREFUELED COMBAT RADIUS (KM)	8,300	9,900	6,000	2,900	3,100
MAX SPEED (KTS)	600	540	1,100	500	600

vehicles in line with intended targets. A single RV version is also operational.

With the advances achieved in other Soviet strategic missile programs, it is assumed the missile for the new TYPHOON will be more capable than the SS-N-18 carried on the DELTA III, possibly having greater range, better accuracy, higher payload and more warheads. Today the DELTA III submarines can cover most US targets from the relative security

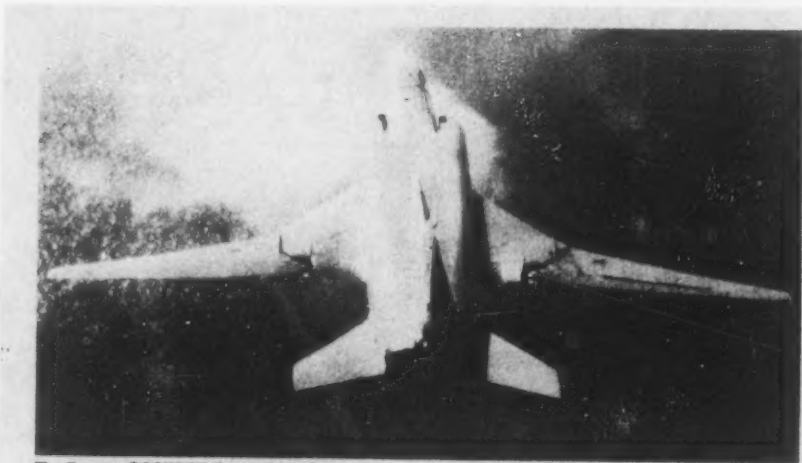
of their home waters. The TYPHOON at 25,000 tons submerged displacement, twice the size of the DELTA III, will certainly have no less capability.

LONG RANGE AVIATION

Long Range Aviation is comprised of more than 800 strike and support aircraft. Three-quarters of these are intermediate-range Tu-16/BADGER and Tu-22/BLINDER; the long-



M-TYPE/BISON Long Range Bomber



The Tupolev BACKFIRE Swing-Wing Bomber

range force includes more than 150 Tu-95/BEAR and M-Type/BISON, as well as some 70 Tupolev BACKFIRES.

The primary mission of LRA is to perform intercontinental and peripheral nuclear or conventional strike operations. The force also performs long-range reconnaissance, anti-naval strikes, and electronic warfare missions. Soviet long-range bombers complement the land and sea-based strategic missile forces, and in the event of intercontinental nuclear war they probably would be employed in follow-on nuclear strikes after initial missile strikes. The manned bombers provide the Soviets a degree of flexibility and diversity in their strategic attack forces not available with ballistic missiles.

The Tu-95/BEAR is a four-engine, swept wing, turboprop-powered bomber capable of carrying free-fall bombs or air-to-surface missiles. First seen in the mid 1950s, about 100

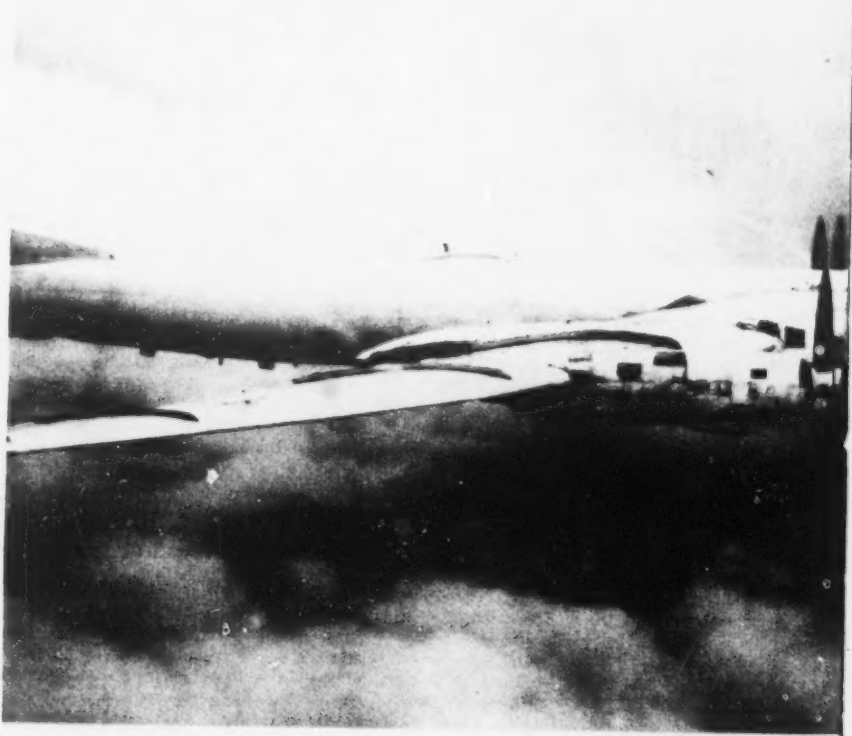
BEARs are still in service with LRA. Able to carry a payload in excess of 25,000 pounds (12,000 kilograms) to a range greater than 11,300 kilometers, it is both the largest and longest range Soviet bomber. The range and flexibility of some models can be further increased with mid-air refueling. Six variants of the BEAR have been produced, three for the strike mission, two for reconnaissance and one for antisubmarine warfare. Two of the strike versions are configured to carry the 650 kilometer AS-3/KANGAROO air-to-surface missile.

The M-4/BISON is a four-engine, swept wing, turbojet-powered bomber capable of carrying free-fall bombs. First seen in the mid 1950's, about 75 are still in service with LRA. About 45 of these are still configured as bombers while about 30 have been modified as air refueling tankers. They could be returned to

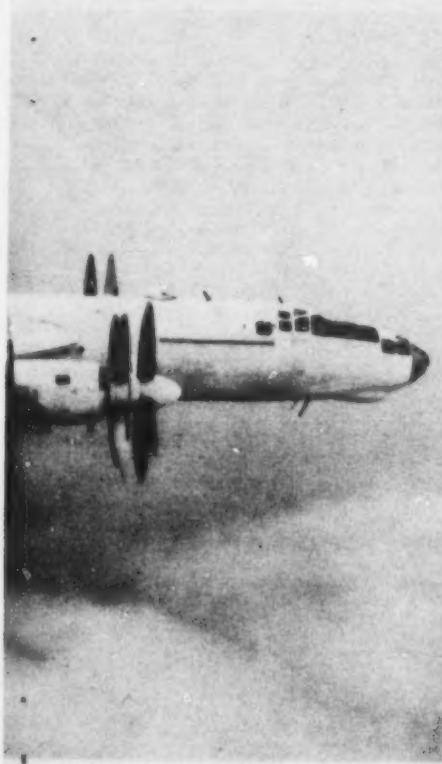
bomber configurations with little effort. This long-range, heavy bomber is able to carry a payload in excess of 12,000 pounds (5,500 kilograms) to a range of about 8,000 kilometers. The range and flexibility of some models can

also be increased with mid-air refueling.

The *Tupolev BACKFIRE* is the latest addition to the LRA forces. The BACKFIRE is a twin-engine, swing-wing, turbofan-powered bomber capable of carrying free-fall bombs or



air-to-surface missiles. Placed in service in the mid 1970s, over 70 are deployed with Long Range Aviation with a like number assigned to Soviet Naval Aviation. This aircraft is still in production at the rate of about two and one-



half aircraft per month, 30 a year.

The BACKFIRE is a versatile, multipurpose aircraft capable of performing nuclear strike, conventional attack, antiship and reconnaissance missions. Its range and payload capabilities are comparable to those of BISON - more than 12,000 pounds (5,500 kilograms) payload and a range in excess of 8,900 kilometers with a bomb load. Its versatility makes it an excellent strike aircraft for peripheral and possibly for intercontinental missions. The BACKFIRE can be equipped with probes to permit inflight refueling which would increase its range and flexibility.

Intermediate Range Bombers: The 600 intermediate range Tu-16/BADGER and Tu-22/BLINDER aircraft represent a significant capability for use in theater strike operations. The Tu-16/BADGER is by far the most numerous aircraft in the force. Ten variants of this twin-jet, subsonic aircraft have been produced. These variants have expanded the mission of the BADGER beyond standard bombing to include electronic countermeasures, air-to-surface missile delivery, reconnaissance, and refueling. The BADGER G can carry two AS-5/KELT to a range greater than 3,200 kilometers while the BADGER A with a 8,360 pounds (3,800 kilograms) bomb load has a range of over 4,800 kilometers. The swept-wing, supersonic Tu-22/BLINDER is powered by two afterburning turbojet engines. The missile-carrier variant can deliver an AS-4 to a range of about 4,000 kilometers. The BLINDER has also been produced in free-fall bomber, reconnaissance and trainer versions.

Air-to-Air Refueling: The Soviets have an air-to-air refueling capability for Long Range Aviation. While they have not yet developed an

Tu-95/BEAR A, the Largest, Long Range Soviet Bomber

aircraft specifically for refueling, some 30 modified BISON aircraft serve as tankers. The Soviets evidently are developing a tanker version of the Il-76/CANDID transport aircraft. If so, the system is not yet deployed in sizable numbers.

SOVIET STRATEGIC DEFENSE FORCES

Since the end of World War II, the Soviets have built and maintained the world's largest strategic defense force. Soviet efforts include each of the primary areas of defense concern: air defense, ballistic missile defense, anti-satellite defense, antisubmarine warfare and civil defense. When combined with the strong counterforce orientation of Soviet strategic offensive forces, these defense efforts point to a strategic concept of layered, in-depth defense of the homeland. This concept starts with preemptive attacks, if possible, against Western nuclear offensive forces and their command and control. It then proceeds to active defense against weapons enroute to targets and to the preparation of passive defenses to protect the Soviet governmental infrastructure and society against the effect of weapons penetrating the defenses.

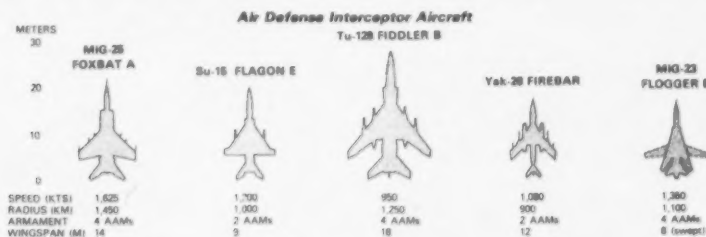
The technical problems associated with defense against air and missile attack are im-

mense. Although Soviet defenses characteristically have fallen short of being able to handle fully the tasks they face, the USSR has persevered and is today entering a period of weapons system deployment aimed at measurably improving capabilities, primarily in air defense.

AIR DEFENSE

Manned Interceptors: Soviet air defenses combine the interceptor aircraft with early warning networks and surface-to-air missiles. There are more than 5,000 early warning and height-finding air defense radars throughout the USSR. Throughout the past decade, the USSR has continued to modernize its air defense forces which currently consist of some 2,500 aircraft, including the MiG-23/FLOGGER, MiG-25/FOXBAT, Su-9/FISHPOT, Su-15/FLAGON, Tu-128/FIDDLER and Yak-28/FIREBAR.

The number of older FISHPOT, FIDDLER and FIREBAR aircraft is decreasing as more modern interceptors are introduced to the inventory. FLAGON and the FLOGGER swing-wing interceptor aircraft are the workhorses of today's air defense interceptor force, comprising two thirds of the total inventory. The FLAGON, first deployed in the late 1960s, has been improved during the 1970s through additional armament and modernized avionics. The





MI-25/FOXBAT Interceptor

FLOGGER is the most widely deployed interceptor.

The Mach 3 FOXBAT, designed to counter a high-altitude threat, can operate at 25,000 meters. A cutback in its production in 1977-1978 suggests that Soviet policy shifted to meet requirements for a low rather than a high-level threat. A number of new interceptor aircraft types could enter the air defense force over the next decade. Soviet research and development most likely will emphasize the development of look-down/shoot-down systems designed to be able to operate above their intended targets, identify and track them against the cluttered background of the earth and fire missiles capable of functioning in the same environment.

AWACS: To increase the effectiveness of their force, the Soviets are developing an increasingly effective Airborne Warning and Control System (AWACS) to detect low-altitude penetrators. An earlier attempt, the Tu-126/MOSS, carrying a large rotodome radar on its back, does not appear to have met the need.

Organization: APVO's interceptor regiments are subordinate to ten air defense districts, each with its specific geographic areas of responsibility. The high concentration of interceptor regi-

ments west of the Ural Mountains, and in the south, reflects the degree of Soviet concern over its perceived major threats—NATO and the People's Republic of China.

Soviet air defense systems are unsurpassed and are deployed in great variety and quantities. The Soviet air defense umbrella is integrated and overlapping and includes both tactical—associated with the Ground Forces—and strategic components. If not occupied with Ground Forces requirements, the tactical air defenses could be available to supplement the strategic forces.

Tactical Surface-to-Air Missiles: The first truly mobile tactical SAM, the SA-4/GANEF, was introduced around 1967. The SA-9/GASKIN infrared homing missile, mounted on a scout car, was deployed in 1968 and the shoulder-fired SA-7/GRAIL was introduced in 1968.

During the last ten years, the Soviets continued to improve the mobility, firepower and target-handling capability of their Ground Forces' air defense umbrella.

In the early and mid-1970s, they introduced the SA-6/GAINFUL and SA-8/GECKO at maneuver division level. The GECKO has a range of over ten kilometers and is unique

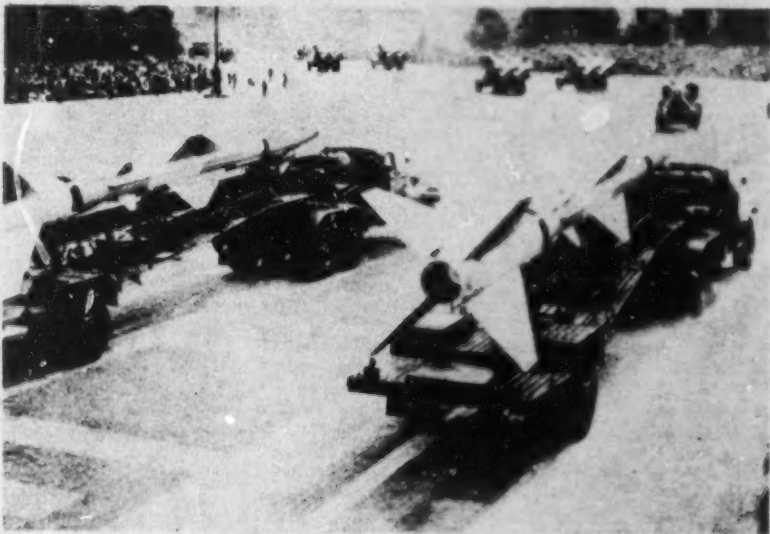
among Soviet tactical air defense systems in that all the components needed to conduct a target engagement are on a single vehicle. The GAINFUL has a range of about 30 kilometers. These new SAMs can keep pace with rapidly advancing maneuver forces.

In the late 1970s, the Soviets fielded the short-range SA-13 on a tracked vehicle. The SA-13 has been deployed along with the ZSU-23-4 in the antiaircraft battery of motorized rifle and tank regiments. The SA-13 is probably a replacement for the SA-9.

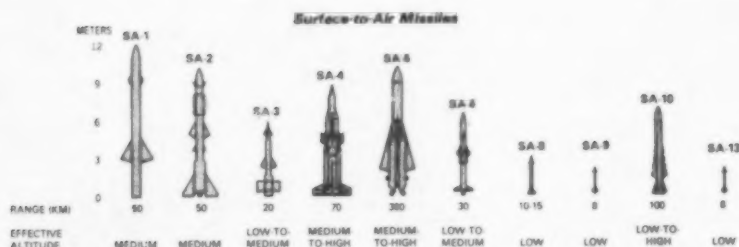
The trend of improving air defense coverage is expected to continue through the modification of existing systems and the introduction of

new systems to supplement or replace them. This will be accomplished by improved technology. The diverse capabilities of Soviet air defense systems will be enhanced by improved command and control procedures to avoid destroying friendly aircraft while rendering the airspace over the ground forces virtually impenetrable to enemy aircraft. Other trends have been to increase the size of the engagement envelope, improve mobility, increase firepower, and increase target handling capability.

Strategic SAMs: The Soviet strategic surface-to-air missile (SAM) force is composed of some 10,000 launchers deployed at over 1,000 fixed sites within the borders of the USSR. These



SA-2/GUIDELINE Missiles on Transporters



launchers can actually accommodate over 12,000 missiles because many of the launchers have multiple launch rails. In addition, other Warsaw Pact countries have over 1,000 launchers deployed in Eastern Europe. Four different SAM systems have been employed at these sites, and a new system—the SA-10—is now becoming operational. The four older systems are the SA-1/GUILD, SA-2/GUIDELINE, SA-3/GOA, and the SA-5/GAMMON, deployed in the USSR only. These systems are under the control of PVO Strany, the Air Defense of the Homeland, a separate service of the Soviet Armed Forces charged with protecting the Soviet Union from attack from the air.

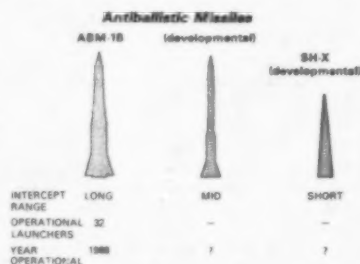
The SA-2, initially operational in 1959, has been the backbone of Soviet SAM defenses. It is deployed throughout the Soviet Union and is used by non-Soviet Warsaw Pact and other communist and Third World nations as well. The SA-3 is now deployed throughout the USSR and Warsaw Pact at over 400 sites. It provides low-altitude coverage and point defense to selected strategic areas. Over half the sites use newer four-rail launchers, rather than the two-rail launchers, thus doubling the numbers of missiles in the ready-launch position.

The SA-5 was first deployed in 1963, and

deployment continues today with over 100 complexes operational throughout the Soviet Union. The SA-5 is a long-range interceptor designed to counter the threat of high-performance aircraft.

The SA-10 system is the latest Soviet strategic SAM system and is designed for increased low-altitude capability. With radars which are more advanced than previous systems, the SA-10 was designed to counter low-altitude manned aircraft, although it may have some capability against cruise missiles.

In all, the Soviets maintain a vast network of SAM sites which are constantly being upgraded. This network, which acts in concert with the



ABM-1B/GALOSH Antibalistic Missile in Transporter/Launcher Canister

large numbers of interceptor aircraft and anti-aircraft artillery, and is enhanced by a virtual 100 percent high altitude coverage of early warning radars, presents a formidable barrier to any would-be attacker from the air.

ABM DEFENSE

The Soviets maintain the world's only deployed antiballistic missile (ABM) defense. The system includes peripherally located HEN HOUSE ballistic missile early warning (BMEW) radars and four operational ABM launch complexes near Moscow. The Moscow defenses currently include the ABM-1B/GALOSH interceptor missiles, battle management radars and missile engagement radars.

The Soviets have continued to improve their BMEW capability by constructing large phased array radars to supplement the old HEN HOUSE network and to close existing gaps in coverage.

They also continue to engage in an active and costly ABM research and development effort, which they are permitted to do under the ABM Treaty of 1972. Their main concentration appears to be on improving the performance of their large phased-array detection and tracking radars and developing a rapidly deployable ABM system. When development of this system is completed, its main elements could be deployed in the Moscow area to replace or supplement the existing system. Such deployment would further upgrade Moscow's defenses, and could provide operational experience for broader deployment. Improving the Moscow defenses is allowed by the 1972 ABM Treaty as long as the 100 interceptor launcher limit is not exceeded. Deployment in additional locations is prohibited by the Treaty.



ANTISATELLITE DEFENSE

The Soviets' defensive posture extends into space as well with the only antisatellite (ASAT) system known to be operational. The demonstrated Soviet nonnuclear low-altitude orbital ASAT interceptor poses a known, if presently limited, threat to some US satellites. It is anticipated the Soviets will continue work in this area with a goal of negating satellites in high orbit, as well as developing more effective kill mechanisms, perhaps using a laser or some other type of directed energy weapons.

SOVIET CIVIL DEFENSE

Soviet civil defense is a nationwide program under military control. The chief of Soviet civil defense is a deputy minister of defense and general of the army. Full-time civil defense staffs



exist at each echelon of the Soviet administrative structure: national republic, *oblast*, city, and urban and rural *rayon*. Civil defense staffs also exist at significant industrial and other installations. In peacetime, more than 115,000 people work full-time in the program. In wartime, the number could be upwards of 16 million. The program costs more than the equivalent of \$2 billion annually.

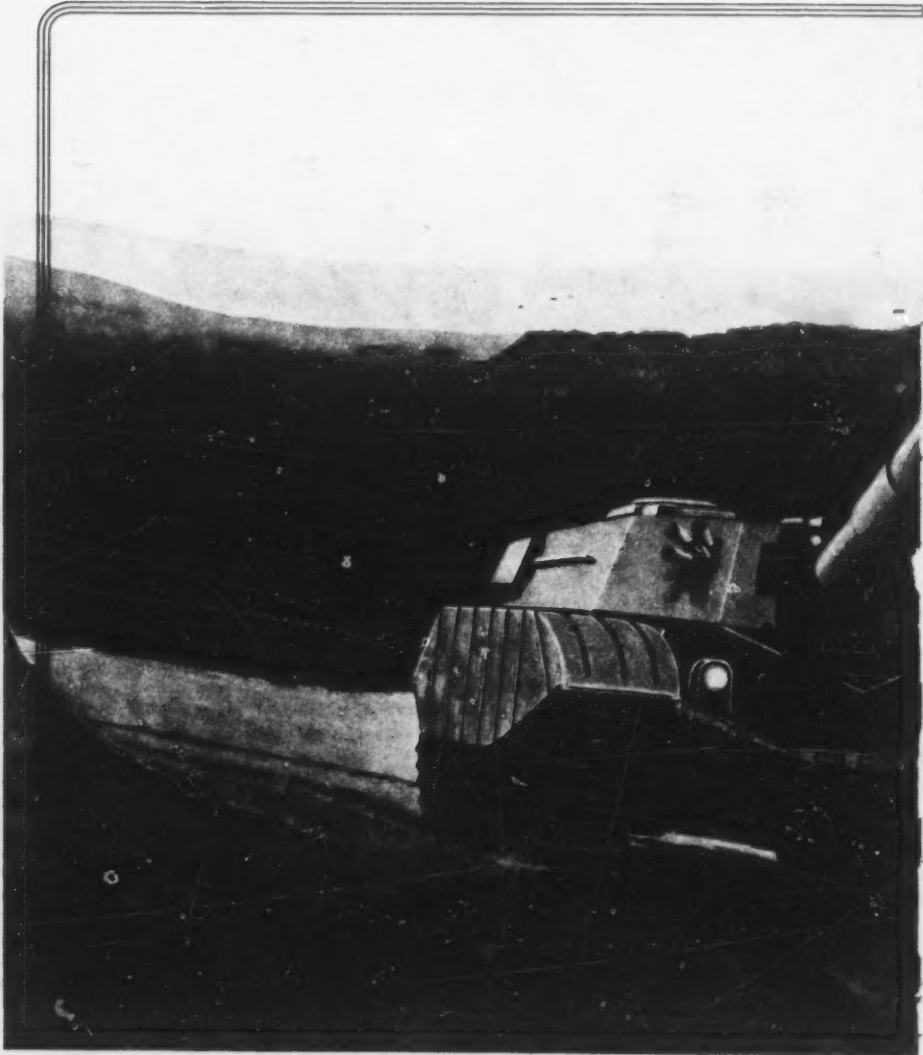
Protection of their leadership has been a primary objective of the Soviets. Given a war-crisis warning of only a few hours, the survival and effective functioning of the 110,000 government and other officials necessary to lead the Soviet Union may be possible. This protection has been achieved through the construction of deep, hard urban shelters and countless relocation sites. Leadership protection, from the na-

tional to *rayon* level, is intended to assure the maintenance of control throughout the society.

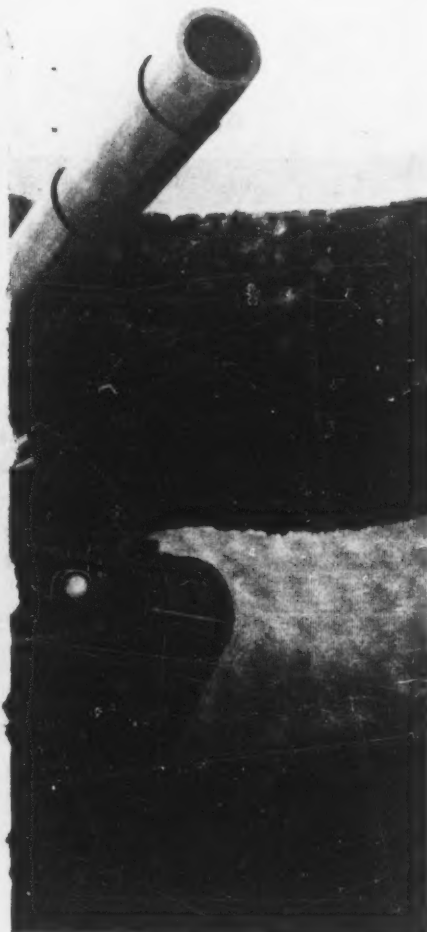
A civil defense problem of vital concern to the Soviets is their continuing inability to provide physical protection for their industrial installations. Although there have been numerous references in Soviet civil defense literature to the desirability of dispersal of key industries for protection purposes, little has been done to achieve this goal.

The Soviet leadership considers the protection of these resources through their civil defense program to be an indispensable element of their strategy. They continue a longstanding commitment to heavy investment in their civil defense program.

VI QUEST FOR TECHNO



LOGICAL SUPERIORITY



The Soviets have often stated their goal of superiority in science and technology. The present, growing Soviet military capability reflects the achievements of a technological base that has grown steadily since the late 1950s, despite the fact that the Soviets have nothing comparable to the commercial technology base in the Western World.

The recent increase in the level of deployed Soviet military technology is significant, because the West has customarily relied on its now eroding technological superiority to offset the Soviet Union's historical quantitative advantage in deployed weapons. Even the United States' lead in basic military technology is presently being challenged.

During the 1970s, the Soviets have dramatically reduced the US lead in virtually every important basic technology. The United States is losing its lead in key technologies, including electro-optical sensors, guidance and navigation, hydro-acoustics, optics and propulsion. In many areas where the United States continues to lead the Soviets, their technology has achieved a level of adequacy with respect to present military requirements.

Over the past ten years, the Soviet Union is estimated to have taken the lead in the development of directed energy weapons such as high-power lasers and possibly radio frequency devices. The USSR is also thought to have enlarged its lead in electrical power sources for such directed energy weapons, as well as its more customary lead in chemical explosives.

The T-80 tank, now in experimental production, is the third, new class of tanks with markedly improved firepower, armor and mobility produced by the USSR in recent years, a weapons system underscoring the across-the-board Soviet quest for quantitative and qualitative weapons superiority.

At present the United States still leads the Soviets by two to seven years in microelectronics, computers and jet engines critical to the development of advanced weapon systems.

In the past, to offset the superior quality of Western weapons, the Soviets have deployed larger quantities of military equipment. Furthermore, they have typically fielded one-and-one-half to two generations of equipment while the West fielded a single generation. And, they have often modified each of these generations two or three times, upgrading their technology with each modification. This combination of a high rate of deployment and an almost continuous program of modifying fielded equipment substantially reduces the average age of deployed technology. The West's technological lead is thus doubly eroded by the much younger age, as well as by the very large number, of fielded Soviet equipment.

The Soviets' weapons development effort, paced by a weapons acquisition process in which key national decision-makers directly participate, represents a systematic correction of deficiencies in the USSR's existing military capabilities and the methodical addition of new weapons capabilities.

The momentum of the Soviet research and development program is likely to continue. Scores of major Soviet systems are now in various stages of test and evaluation. Many of these systems are quite significant, for example, the T 80 tank, the TYPHOON ballistic missile submarine, the OSCAR cruise missile submarine, a new interceptor and associated look-down shoot-down missile and a variety of precision-guided munitions.

Pacing each of the Soviet weapon system developments is a very large research effort in the sciences and technologies. Over the past ten years, the high-priority military research and development sector received large infusions of





capital investment leading to significant growth in those research, design and test facilities critical to Soviet weapons development.

A concurrent increase in the size of the Soviet R&D manpower force has also been noted. In 1980 the USSR was believed to have had nearly 900,000 full-time equivalent scientists and engineers engaged in research and development. This is the world's largest aggregation of scientists and engineers and is compared to about 600,000 for the United States. While the number of scientists and engineers specifically engaged in Soviet military R&D is unknown, it is clearly a large percentage of their total effort.

Soviet Research and Development Centers



In 1980 the Soviets graduated about 300,000 engineers and 150,000 natural scientists (including life sciences and medicine) out of a total of over 800,000 graduates. The trend in Soviet higher education graduates has been one of steady increase, although the rate of increase has declined in recent years. By 1990 the total number of graduates in the USSR is expected to be at least 950,000 per year.

**ALFA-Class Nuclear-Powered Attack Submarine:
Deep-Diving, Titanium Hull, Submerged Speed
Estimated to be Over 40 Knots.**

MILITARY TECHNOLOGIES

Certain critical military technologies including electronics, propulsion, materials and life sciences are receiving highest priority in the USSR today.

Electronics and Computers: Although the United States remains the world leader in the field of microelectronics and computers, Soviet progress in the past 15 years has been impressive.

Advanced miniaturized electronics or microelectronics are vital and necessary elements of modern computers. Since modern electronic computers are the "heart" and "brain" of mili-

tary weapons, and industrial, economic, management and other complexes or systems, Soviet achievements in microelectronics greatly benefit the military.

In 1965, Soviet development and production of microelectronics and computers was about 10-to-12 years behind US capability. Today, the average relative position or "gap" is three-to-five years with a few outstanding developments following US technology by only two years and some problem areas lagging by as much as seven years. Important Soviet decisions to acquire US and Western technology and copy, or "reverse engineer," microelectronics and computers by

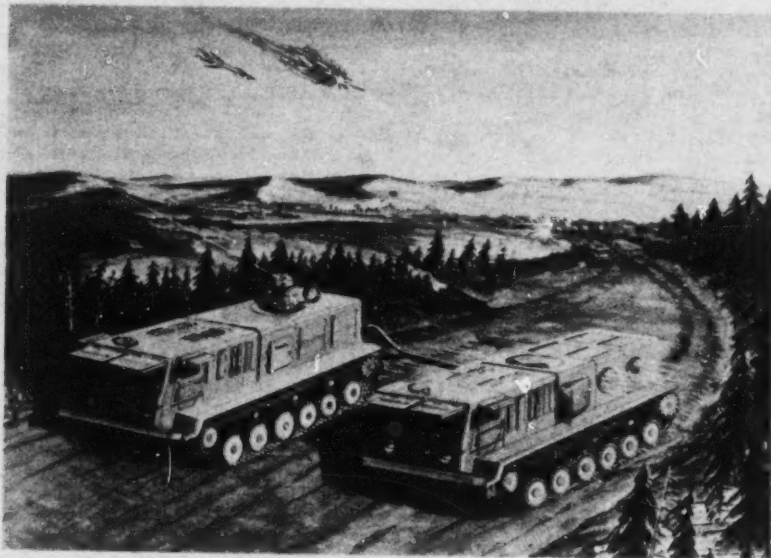


Soviet RYAD Computers

any means available have played a fundamentally important role in their success. The Soviet RYAD series of computers are based on existing US computer equipment. Similarly, Soviet microcomputers and microprocessors are clearly based on US minicomputer and microprocessing equipment already on the market. The Soviets have also copied many different types of US integrated circuits including computer logic and memory chips from practically all the major US microcircuit manufacturing facilities. Without the transfusion of US technology and equipment, the Soviet Union's capabilities would almost certainly have remained at the 10-

to-12 year gap of the 1965 era.

Directed Energy Weapons: The Soviets have devoted substantial resources to high technology developments applicable to directed energy weapons. Their knowledge of radio frequency weapons, as demonstrated in Soviet open literature, and the fact that they are developing very high peak-power microwave generators, gives rise to suspicions of possible weapon intent in this area as well. The Soviets have been interested in particle beam weapons (PBW) concepts since the early 1950s. There is considerable work within the USSR in areas of technology relevant to such weapons.



Artist's Concept of Soviet Surface-to-Air Laser Weapons

The Soviet high energy laser program is three-to-five times the US level of effort and is tailored to the development of specific laser weapon systems. In contrast, the United States largely confines its laser programs to exploratory work. The Soviet laser-beam weapons program began in about the mid-1960s. Since then the Soviets have been actively pursuing the development of all the high energy laser types considered most promising for future weapons applications. They have worked on the gas dynamic laser, the electric discharge laser and the chemical laser. Available information suggests that the Soviet laser weapon effort is by far the world's largest. Their development of moderate power weapons capable of short-range ground-based applications, such as tactical air defense and anti-personnel weapons, may well be far enough along for such systems to be fielded by the mid-1980s. In the latter half of this decade, it is possible that the Soviets could demonstrate laser weapons in a wide variety of ground, ship and aerospace applications.

Pulse Power and Technology: Pulsive power and energy conversion have been recognized as key technologies in the development of directed energy weapons. Possible applications include tactical airborne electric discharge lasers, tank and helicopter-mounted laser weapons, strategic or defensive antiballistic missile and antisatellite weapons and beam weapons for both short and long-range antiship missile defense. A principal pacing factor in the development of directed energy weapons is the availability of a suitable supply of energy. Pulse power technology may be the pacing factor in a weapons program even after the feasibility of beam propagation and adequate lethality is demonstrated. Because the requirements of beam weapons are unique and, in many cases, exceed current state-of-the-art, they have driven the

major research and development efforts in the USSR.

Propulsion: The Soviet Union customarily provides the propulsion units for all its aircraft, ships and land vehicles. The Soviets have conducted research and experimentation on new types of propulsion concepts for generations and have often produced innovative designs. For example, the SA-6/GAINFUL missile unveiled in 1967 used the world's first integral rocket ramjet. The Soviet recognition of the advantages in gas turbines for naval propulsion resulted in an impressive shift to this form of propulsion in the past 20 years. In addition to their low weight and volume, the advantages of gas turbines include operational flexibility, reduced manning levels, and ease of maintenance.

Until recently, the Soviet Navy's KARA-Class guided missile cruiser, operational since the early 1970s, was the world's largest gas turbine-powered warship. The USSR still leads the world in the widespread use of naval gas-turbine propulsion. It has applied this mode of propulsion to over 200 major and minor combatants.

Propellants: Soviet scientists are investigating all aspects of propellant chemistry and performance characteristics at several academic institutions throughout the USSR. The Soviets design their artillery and other propellant charges to obtain maximum performance, although they tend to use low energy propellant formulations in most of their large-caliber ammunition to maximize safety and storage life.

Explosives: The USSR is active in all facets of explosives research and development. The Soviets can now synthesize every known explosive compound with a military application, including research for fuel-air explosives. They can load their newest weapons with warheads containing TNT (trinitrotoluene), RDX (cyclo-

trimethylene trinitramine) or HMX (cyclotetramethylene tetranitramine). Western fuel-air explosive munitions are capable of clearing paths through minefields to permit the passage of armored vehicles. Such explosives can also do extreme damage to unarmored targets such as radar vans and aircraft.

MANUFACTURING

The success or failure of all weapons is heavily dependent on the quality and quantity of the materials used in their construction. The USSR has the largest raw materials base in the world and claims deposits of nearly all minerals needed by a modern economy. Since the 1950s, materials used in Soviet weapon systems have steadily improved.

Through considerable efforts and a combination of foreign and indigenous technology, the Soviets have built an imposing industrial base. While frequently less efficient in their use of capital, raw materials and manpower, the Soviets have nonetheless assembled the plant and equipment necessary to build annually thousands of tanks, trucks and aircraft and dozens of naval vessels.

Welding has assumed a high position among the fabrication techniques used by the Soviets because it permits complex shapes to be formed from a limited variety of mill products (e.g., sheet, plate, tube and rods). To augment their strong position in this area, the Soviets graduate several thousand welding engineers annually. The Soviets have been important innovators of welding methods, e.g., friction welding, submerged-arc welding, glue welding and certain aspects of pulse-arc welding. They have been creative in their development of methods for welding dissimilar and difficult-to-weld materials. Their construction in the late 1950s of what continues to be the world's largest forging and extrusion presses at 75,000 tons and 20,000

tons, respectively, was a bold move that enables the Soviets to fabricate aircraft structural components in sizes and with efficiencies that are unsurpassed.

By the late 1960s, the Soviets had perfected two new methods for refining steel and other alloys—electroslag remelting and plasma-arc melting—advancements in the methods to improve the properties of alloy materials.

The vast amount of technical data published by the industrialized Free World on materials technology has permitted, and has probably encouraged, the USSR to emulate and adopt Western developments. The differences in the materials used in Soviet and US weapon systems are thought to be approaching the point where the differences are no longer militarily meaningful.

Metallic Materials: Soviet achievements in metallurgy cover the complete spectrum of research and development emphasizing alloy development and materials processing.

The Soviet Union produces a full range of structural steels from the plain carbon and high-strength low-alloy steels to the stainless and maraging steels. The Soviets also are producing a unique high-manganese steel for cryogenic applications due to their abundant supply of manganese-bearing ores.

While high energy costs have reduced Western use of magnesium alloys, the Soviet Union's production of magnesium alloys was increasing in the 1970s. The weight advantages of their magnesium-lithium alloys may cause this material to be useful in aerospace systems.

Since the 1940s, the major industrialized nations have committed great amounts of R&D manpower and resources to improving the performance of the superalloys. The term "superalloy" refers to alloys that possess good strength and oxidation resistance in the temperature range of 650°C-2000°C. These alloys are of

critical importance in the high temperature sections of gas turbine engines. The Soviet superalloys are thought to be as capable as Western alloys with respect to temperature capability but may possess shorter service lives.

The USSR is the world's largest producer of titanium alloys. The Soviets' titanium alloys are being extensively applied to enhance the performance of aircraft, missile, and naval ship systems using modern welding techniques.

Composite Materials: Since the mid 1960s, the Soviets have been constructing small naval vessels from glass-fiber-reinforced plastics. The glass-fiber-reinforced plastics also have been introduced into aircraft, missile and ground weapons applications. Based on Western successes in the late 1960s on high-performance carbon and boron-fiber reinforced materials, the Soviets launched a parallel effort in the mid 1970s. Their program is progressing along similar lines to that taken by the US and other Western countries by first incorporating such materials into aircraft secondary structures and control surfaces. The large Soviet commitment of physical and manpower resources to the development of a variety of high-modulus fiber-reinforced metal, organic and inorganic matrix composites should enable them to gain ground quickly in this field.

Organic Materials: By the early 1960s, the Soviets realized the importance of organic materials—resins, elastomers, adhesives, synthetic fibers—to a modern economy and military preparedness. Since that time, the USSR's chemical industry has been expanding at a formidable rate. Much of the technical knowledge has been directed at achieving high temperature capabilities.

LIFE SCIENCES

The Soviet Union has extensive R&D programs in the life sciences, the medical, biologi-

cal, and behavioral sciences, and, in some areas, their capabilities equal or exceed those of the United States.

In general, the Soviet Union's life science research program centers on those areas that permit them to establish or maintain a military advantage, and those areas that will contribute to the solution of critical economic, industrial and political problems. While their efforts in manned space flight, for example, were devised to gain maximum political benefit, their current efforts seem to be related to the establishment of a military presence in space. Man-related problems and life support systems capability are the chief limiting factors in Soviet manned space flight.

The Soviets also conduct extensive research in other areas that contribute to the establishment of a military advantage. Underwater physiology, submarine habitability, human factors engineering and aviation physiology are examples of this type of research. The research goals in these areas are related to improving the performance of the biological component of their weapon systems.

The Soviet Union also conducts biomedical research in many other areas that affect their military capability. There is continuing Soviet interest in the recognition of emotional and physiological stress by voice analysis. Battlefield troops, pilots, submarine personnel and other isolated individuals could be monitored by voice analysis. The only constraints would be the quality of voice transmission and the analytic techniques.

Other areas of biological science research in the Soviet Union are directly applicable to developing weapon systems. Research in behavioral modification, biological warfare and genetic engineering all have the potential to result in the development of new and extremely effective weapons.

Behavior Modification: The Soviets are currently engaged in a number of research efforts directed at modifying the brain, its activity and ultimately the behavior of individuals and large groups of people. Significant work in this area—including psychosurgery, microelectrode implantation, electromagnetic radiation, drugs and physical methods for altering behavior—has been conducted. The Soviets have political and military goals for conducting behavior modification research.

Biological Warfare: Since the summer of 1979, information has been obtained from a variety of sources that presents strong circumstantial evidence of an inadvertent release of anthrax bacteria from a highly secured military installation in Sverdlovsk, in the USSR. The available information and our technical analysis point strongly to biological R&D activities that exceed those one would normally expect for biological warfare protection purposes. Furthermore, we cannot discount the probability that the Soviets have continued to pursue other microbiological agents for possible development and standardization as weapons of biological warfare.

Genetic Engineering: The Soviet Union is currently conducting extensive work in genetic engineering, which is the ability to selectively modify the composition of the genetic blueprint (DNA) in order to engineer biological organisms to meet specific design criteria. Although there is no work with genetic engineering being done in the Soviet Union that is known to be directly related to biological warfare, there is interest in this area. Soviet scientists are researching genetic regulatory mechanisms, recombinant gene vectors, recombinant gene stability, and basic aspects of viral and bacterial genetics, all of which have potential value for development of biological warfare agents. Similar research is, however, being pursued on a broader

scale in the United States and may serve as an impetus for increased Soviet interest. Of greatest potential benefit to the military is the development of vaccines using recombinant technology for troop immunization.

SPACE PROGRAM

The Soviets have a vigorous and constantly expanding military space program. In the past ten years they have been launching spacecraft at over 75 per year, at the rate of four-to-five times that of the United States. The annual payload weight placed into orbit by the Soviets is even more impressive—660,000 pounds—ten times that of the United States. Some, but by no means all, of this differential can be accounted for by long-life US satellites using miniaturized high technology components. Such an activity rate is expensive to underwrite, yet the Soviets are willing to expend resources on space hardware at an approximate eight percent per year growth rate in constant dollars.

We estimate that 70 percent of Soviet space systems serve a purely military role, another 15 percent serve dual military/civil roles, and the remaining 15 percent are purely civil. The Soviet military satellites perform a wide variety of reconnaissance and collection missions. Military R&D experiments are performed onboard Soviet manned space stations, and the Soviets continue to develop and test an ASAT antisatellite co-orbital interceptor.

The Soviets appear to be interested in and possibly developing an improved ASAT. A very large space booster similar in performance to the Apollo program's Saturn V is under development and will have the capability to launch very heavy payloads into orbit, including even larger and more capable laser weapons. This booster is estimated to have six-to-seven times the launch weight capability of the Space Shuttle.

Soviet space research and development, test,

production, and launch facilities are all undergoing a continuing buildup. The new booster will be capable of putting very large permanently manned space stations into orbit. The Soviet goal of having continuously manned space stations may support both defensive and offensive weapons in space with man in the space station for target selection, repairs and adjustments and positive command and control. The Soviet's predominantly military space program is expected to continue to produce steady gains in reliability, sophistication and operational capability.

TECHNOLOGY TRANSFER

In addition to being the source of much of the Soviet Union's electronic and computer technology and advanced manufacturing capability, the industrialized Free World, during the past decade, has supplied the Soviet industrial sector with billions of dollars worth of efficient machine tools, transfer lines, chemical plants, precision instrumentation and associated technologies. These goods and technologies have unquestionably played a major role in the modernization and expansion of Soviet industry. Although much of the technology embodied in the Western equipment is known and understood by Soviet technicians, the purchase of such equipment via long term low interest loans has enabled the Soviet Union and other Warsaw Pact countries to achieve an industrial expansion at a substantially faster rate than would have been possible with indigenous resources.

In addition to the acquisition of Western industrial plants and equipment, the decade of the 1970s has also witnessed greatly expanded contact between the Free World and Soviet scientists and engineers. The scope and depth of their interest in the advanced and emerging technologies is exemplified by the exchange agreements that the Soviet Union has nego-

tiated with the United States since 1972.

Bilateral S&T Exchanges: In 1972 the Soviets signed the first four of 11 agreements with the United States dealing with cooperation in the fields of science and technology. These 11, now combined into ten agreements, have encompassed as many as 250 different working groups and subgroups for the exchange of scientists, scientific and technical information and documentation, and joint research, development, testing and exchange of research results and experience.

Another mechanism of technology transfer under seven of the ten agreements is contained in a provision, "Article IV," stating that both parties encourage and facilitate the establishment and development of direct contacts and cooperation between agencies, organizations, and firms of both countries. The majority of the "Article IV" agreements are with the Soviet State Committee for Science and Technology. This is the unit charged with the responsibility of coordinating technology acquisitions from the West.

Student Exchanges: Student exchanges usually occur under the aegis of a cultural agreement. The student exchanges with the Soviet Union and the East European communist countries are administered by the International Research and Exchanges Board (IREX). The average Soviet student in such exchanges is 33-to-35 years of age, possesses a Candidate degree, roughly equivalent to a Ph.D., and has about eight years of practical experience, almost all of which apply to the study and conduct of research in the hard sciences or engineering. Further, the students want to concentrate in the emerging technological areas, with many of these areas having immediate military application.

In the senior scholar program, each side sends a number of scholars for a total of 50 man

months per year. As with the student exchange program, the Soviets tend to send scientists, while the United States sends persons specializing in the arts, literature, and history. Until a few years ago, most Soviets in this program conducted very basic scientific research. Now, nearly all of them propose to study in the emerging scientific fields, with most of these fields having direct and immediate military application.

Inter-Academy Exchange: The exchange between the US and Soviet Academies of Science makes available another mechanism of technology transfer. The provisions of this agreement permit the exchange of 12 scientists per year (one month each) for the purpose of survey and familiarization visits, and as many as 18 scientists for periods of three to 12 months each for a maximum of 88 man months per year.

Conferences/Symposia: The problem of technology transfer at conferences is one of additional concern. US companies use such gatherings to advertise the results of their work to industry, government, and the academic community in the hopes of securing additional contracts. The academic community uses conferences and symposia for the presentation of major papers. The government frequently uses this media to advertise its requirements and to provide status reports. For whatever reasons, this media makes available a wealth of scientific and technological data that is probably not surpassed by any other nation.

Unclassified Reports: All research reports and studies conducted by, or for, the US government are placed in one or more repositories. In defense, most reports and studies are sent to the Defense Technical Information Center (DTIC), where they are accessioned and the classified documents stored. Such classified documents are readily available to other government agencies and personnel who have

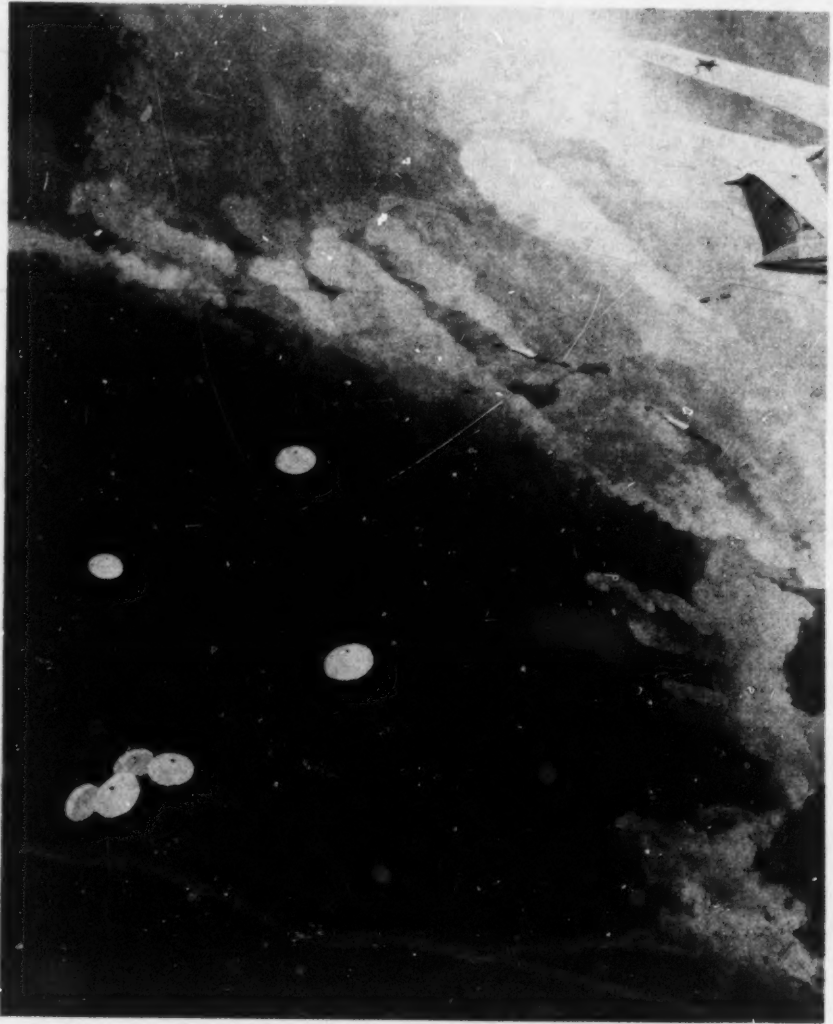
the requisite clearances and need-to-know. They are also available to government contractors who have established a valid need through their contracting officer and possess the necessary facilities and cleared personnel. Unclassified reports received by DTIC are forwarded to the National Technical Information Services (NTIS) operated by the Department of Commerce. These reports are available to anyone for a very nominal fee.

The communist countries are some of NTIS' best customers. Until their subscription was terminated in February 1980, the Soviets purchased each of the estimated 80,000 documents entering NTIS each year. The remaining Warsaw Pact countries and individuals acting on behalf of the Soviets still purchase from the NTIS.

Professional/Open Literature: For many years professional and open literature has been exploited for technology transfer information. There is believed to be a great imbalance in the value of such literature in favor of the communist countries.

The Soviets are seeking Western technology and equipment by any and all means in their quest for technological superiority. In the past, Soviet weapon designers appeared to be somewhat constrained in the effectiveness of the products they could develop by a limited technological base for specialized components. Technology transfer affords them the opportunity to rectify such deficiencies. The vast amount of information gained from the United States saves the Soviets a considerable amount of time and money by pointing out the fruitful avenues of research and development.

VII SOVIET GLOBAL P



OWER PROJECTION

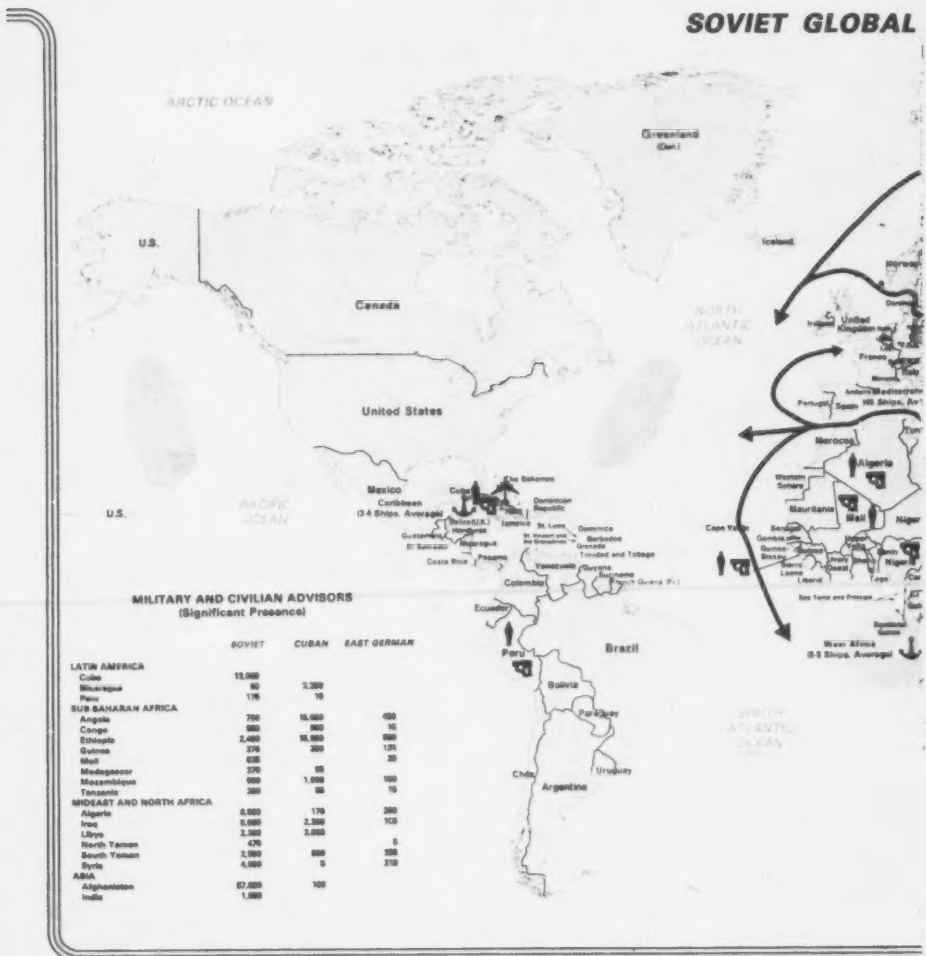


As self-designated leader of the communist world and as a superpower with global ambitions, the USSR and its expansionist efforts abroad are targeted at spreading and solidifying USSR political, economic and military influence and drawing nations into its orbit. The Soviets view the projection of power in much more comprehensive terms than commonly understood in the West. Their programs seek to integrate all instruments at their disposal in pursuit of their goals. In the past decade, Moscow's increasing boldness can be linked directly to the growing capabilities and utility of its military forces, applied in a pragmatic, coordinated and flexible manner with other military, political, economic and subversive measures to influence world events. The USSR's enhanced confidence in its capabilities to project power through a variety of military and non-military means has widened Soviet options and has been a key factor underlying its increased activities in Africa, the Middle East, Asia and Latin America. In the military realm alone, involvement abroad has progressed steadily from the limited use of military assistance in the 1950s, to the occasional use of its armed forces in defensive roles in the early 1970s, to the extensive use of proxies in advisory positions and combat operations over the last five years, to the direct application of large-scale Soviet military force in Afghanistan since December 1979.

Violence and coercion have played a central role in the establishment and maintenance of

The CANDID jet transport, which can carry 140 troops or 40 tons of cargo, entered service in the mid-1970s to help meet the USSR's worldwide military airlift requirements. Because of their mobility, the USSR's seven airborne divisions are particularly well-suited for the rapid introduction of Soviet combat forces.

SOVIET GLOBAL



POWER PROJECTION

the Soviet Union and its East European satellites. The Soviet need for and use of force as a tool of domestic control, combined with the historic Russian policy of security through territorial aggrandizement, have given it the impetus to attempt to transform conflicts, tensions and resentments into concrete political gains. While the Soviets no longer wholly subscribe to Lenin's dictum that the advance of socialism "...is impossible without a violent revolution...and the destruction of the apparatus of state power..." they do believe that military force is the major propellant of change in international affairs. They see growing Soviet military strength as providing a favorable backdrop for the conduct of their dual-track foreign policy: the maintenance of traditional diplomatic and economic ties on the one hand, while promoting subversion and revolution in the same states on the other.

Trends in the Soviet military force buildup over the past 15 years have resulted in a number of improvements allowing for the increased use of military power to support foreign policy goals. Primary among these have been the development of an effective Navy with global capability and the expansion of strategic airlift capability. Soviet military leaders have long recognized the political significance of these improvements, and in the early 1970s began making authoritative statements about the utility of Soviet Armed Forces beyond the borders of the USSR.

Soviet adventurism has been buttressed by the USSR's belief that the correlation of forces has shifted in Moscow's favor. Soviet leaders continue to refute any inconsistency between detente with the West and their growing support of revolutionary activism and insurgencies in the Third World. They believe that comprehensive aid to progressive forces is a moral requirement rather than interference by an exter-

nal power. Article 28 of the 1977 Soviet Constitution specifically commits the Soviet Union to support wars of "national liberation."

To the Soviets, power projection does not involve the episodic military reaction to regional or world crises. Rather, it is a continuously applied means of foreign policy activity. Besides military forces, the Soviets project power and influence through the employment of a mixture of less visible, integrated elements including the KGB, diplomats and traditional state-to-state activities, military advisers and aid, treaties and legal ties, support for terrorists and pro-Soviet guerrilla groups, economic aid, cultural, media, and educational diplomacy, and the use of what the Soviets call active measures such as propaganda, blackmail and forgery. The coordinated use of these tools allows Moscow to develop an "infrastructure of influence" in a target country and to react rapidly to changing situations by applying the appropriate instruments, allowing the penetration of areas that may be beyond the immediate reach of Soviet military forces.

In their projection of power the Soviets include the pursuit of specific military objectives, for example, the acquisition of overflight clearances and access to facilities abroad to support the military operations of Soviet and friendly forces and to expedite the air- and sea-lift of military equipment to Third World clients and insurgent forces. Overseas facilities ease the logistic problems of operating naval forces and aircraft at great distances from the Soviet homeland.

A broader, basic Soviet objective is the termination of Western and Chinese influence in the developing countries, and the concomitant expansion of the USSR's own political, military, and economic power and influence. The Soviets seek to gain strategic footholds in a number of client states and to promote the accession to

power of radical, anti-Western regimes. In this process and in order to demonstrate that they retain their leadership of the world communist movement, the Soviets portray themselves as the ideological vanguard of the world's "national-liberation" movements.

The Soviets are also seeking to develop a viable oil and strategic minerals denial strategy, either through physical disruption, market manipulation, or domination of producing or neighboring states. Soviet statements clearly reflect the USSR's understanding of the extent to which the United States and Western Europe currently depend on imports of vital strategic materials from the developing regions. By undermining Western ties with the oil and raw materials producers and exacerbating differences in the Western Alliance over policies toward these regions, the Soviets seek to erode both the economic health and political cohesion of the West.

The planning and control of foreign policy is the exclusive domain of the central organs of the Communist Party—the Politburo and the Central Committee. The orchestration of all foreign operations, including the broad range of subversive activities, is the responsibility of the Central Committee's International Department. The International Department's most important task is to advise on and implement the export of revolution. It maintains contact with scores of communist and radical parties and groups, allocating funds, providing training, and devising takeover strategies. The International Department plans, coordinates and oversees the work of various Soviet party, state and military organs involved in official activities abroad, as well as the KGB, front organizations, friendship societies, insurgent groups, and other elements engaged in illegal, subversive, and clandestine operations. Possession of a highly centralized, interlocking, authoritarian

decision-making and decision-implementing apparatus facilitates the USSR's coordination of various tools and tactics toward basic goals and creates a synergistic effect difficult for Western democracies to match.

INSTRUMENTS OF EXPANSION

Arms Sales: Since their origin in 1955 with a \$250 million arms agreement with Egypt, the Soviet Union's military sales have grown into a multi-billion dollar annual program. These sales form the basis for Soviet penetration of a number of Third World countries, providing Moscow access to nations and regions where it previously had little or no influence. In the last 25 years, the Soviets have granted over \$50 billion in military assistance to 54 noncommunist nations, with 85 percent going to nine nations in the Middle East and along the Indian Ocean littoral. This is supplemented by \$4.3 billion in arms sales by Warsaw Pact allies.

The Soviet Union's willingness to provide arms to almost any customer at low prices has been an important inducement to newly independent former colonies eager to improve their military capabilities. The favorable financial terms, eight-to-ten-year deferred payments at two percent interest, coupled with free training and maintenance services as well as fast delivery schedules, prove to be important enticements in gaining early contracts.

The Soviets have been adept at exploiting anticolonial nationalistic sentiments to the detriment of Western nations. The Arab-Israeli conflict, Indo-Pakistani tensions, as well as "liberation" movements in sub-Saharan Africa and Central America have all been utilized by the USSR to gain access and a subsequent political role in regional affairs. Major Soviet resupply efforts following the 1967 and 1973 Mideast wars contributed to the rapid growth in Soviet arms sales.

Provision of more complex equipment at higher prices resulted in a nearly threefold increase in Soviet arms sales in the period 1974-1980 in contrast to the previous 20 years. Four major Arab client states accounted for over 70 percent of the \$37 billion in arms aid during this period. Sales to India and Ethiopia accounted for another 15 percent. Recent exports include such advanced systems as the MiG-25 and MiG-23 fighters, the SA-6 and SA-9 missiles, the Mi-24/HIND attack helicopter, and the T-72 tank. Occasionally, these weapon systems have been exported to important clients before they have been provided to Warsaw Pact allies.

Military Advisers: The dispatch of Soviet advisers is a natural—and often required—complement to the provision of arms and equipment. In 1980, approximately 20,000 Soviet military personnel were stationed in 28 countries, where they play a central role in organizing training and penetrating client-armed forces. Heavy concentrations of advisers are found in those countries with large amounts of Soviet arms: Algeria, Libya, Angola, Ethiopia, Iraq, Syria and South Yemen. Important missions are often headed by one or more Soviet flag or general officers.

Since 1955, some 52,000 military personnel from the less-developed countries have been trained in the USSR and East Europe. Soviet advisers are able to cultivate pro-Soviet sentiments, influence local military policies and pinpoint promising candidates for further training and indoctrination in the USSR. The importance the Soviets attach to the missions and roles of military advisers is underscored by the fact that a Main Directorate of the General Staff centrally controls their operations.

Economic Aid: Selective economic aid often follows arms sales in Soviet efforts to increase its influence in the Third World. However, total

Soviet economic aid is well below arms aid, amounting to only \$18 billion to 67 countries in the last 25 years. The USSR has achieved a number of important benefits from its small economic assistance program, at a very small cost to the Soviet economy. By concentrating on a number of highly visible showcase projects such as the Aswan Dam in Egypt, the Bokaro Steel Mill in India and the Tigris-Euphrates Dam in Syria, the Soviets have gained maximum political benefits.

The economic aid program has also resulted in an expansion in Soviet trade with the nations of the Third World. In 1955 total Soviet trade with Third World nations was \$260 million. By 1978 that figure had increased to \$13.4 billion, or roughly 15 percent of the Soviet total. An added advantage of this trade was that much of it was conducted in hard currency, which earned the Soviets funds with which they could purchase needed Western technology. Additional hard currency earnings from the nearly 33,000 Soviet economic advisers worldwide have grown to over \$100 million. Projects such as a gas pipeline in Afghanistan and an alumina plant in Turkey exported needed raw materials back into the Soviet economy, another benefit of the aid program.

The economic aid program has also enabled the Soviets to provide training for Third World nationals in the Soviet Union. These trainees have returned to their native countries and now make up a considerable portion of the total number of professional and skilled workers in these nations. Roughly 31,000 students, mostly from African and Middle Eastern nations, were being trained in the Soviet Union in 1979. The Soviets view their economic aid program as an important tool for expanding Soviet influence in the Third World.

Proxies: The use of proxy forces has significantly augmented Soviet power projection

capabilities. The Soviets have drawn on the political, military, and economic dependence of such allies as Cuba and East Germany in order to promote anti-Western causes and extend the USSR's own influence. The dispatch of proxy military forces and advisers to contentious areas minimizes the USSR's risks and deflects charges of imperialism while also giving support to progressive forces in a regional conflict.

Since the large-scale introduction of Cuban troops into the Angolan civil war in 1975, Cuban units and military advisers have grown in numbers in sub-Saharan Africa and have also appeared in the Middle East. There are currently approximately 35,000 Cuban military personnel in nearly 20 countries—about 20 percent of Cuba's regular forces. In addition to Angola and Ethiopia, substantial numbers of Cubans are in Mozambique and South Yemen. Soviet-blessed or inspired Cuban activities in the Caribbean and Central America are on the upswing. Cuban roles abroad include military, economic, and intelligence and security operations.

Fidel Castro has declared that it is Cuba's duty to help liberate the Third World from colonial, imperialist bonds, but Havana's capability to send military personnel overseas would be considerably reduced without massive Soviet support and sponsorship. Castro's repeated assertion of a natural alliance between the less-developed, nonaligned nations and the Soviet camp is a classic case of a proxy espousing the Soviet Union's propaganda.

Among the East Europeans, the East Germans are the most active proxies, specializing in the training of police and security cadres and intelligence operatives, the penetration of local governments, and the development of communist parties and front organizations. To a lesser extent, Hungarian, Czechoslovak and Bul-

garian involvement has been noted in Africa and the Middle East.

The Soviets have also gained international advantages through other nations whose interests and aims often converge with the USSR's. Vietnam's military activities in Southeast Asia and its posture as a counterweight to China, periodic South Yemeni instigation of instability on the Arabian Peninsula, the involvement of North Korean pilots in a number of overseas countries with sensitive political situations and Libya's support for a variety of radical and terrorist causes all serve as examples.

Treaties: As a major component of its efforts to consolidate its ties with less-developed nations, the USSR has signed 12 treaties of friendship and cooperation since 1971, of which ten are still in force. While such pacts do not reflect the true nature of the Soviet support, it is no coincidence that the signatories have been the recipients of substantial Soviet military and economic assistance. The signing of these treaties occurred at different stages of Soviet relations with the countries in question. With Angola and Ethiopia, treaties were signed after the principal objectives of military operations were basically achieved and the Soviet presence was entrenched. Moscow signed pacts with New Delhi and Hanoi shortly before they launched invasions of Pakistan and Kampuchea, respectively. The ruling regimes in the Congo, Syria and Afghanistan signed partly because they needed a tangible sign of Soviet backing against domestic opponents.

The treaties vary slightly, containing similar calls for mutual cooperation, respect for sovereignty, and consultation on issues of common interest. While none are mutual defense pacts like those between the USSR and Eastern Europe, they all contain a general provision calling for military cooperation in the face of "threats" to peace and security. The USSR used

that article in the treaty with Afghanistan as a legal pretext for its military intervention. A similar article in the Vietnam treaty provided the rationale for Moscow to support and supply its client during and after Vietnam's February 1979 war with China.

Subversion: Overt foreign programs are paralleled by covert action. The principal instrument for these activities is the KGB, although other Party and state organs are brought into play. The foreign operations of the KGB, which has a unique charter as the Party's action arm for the projection of Soviet power, are of two complementary types: destabilization and penetration. The destabilization of target countries is accomplished by the use of such techniques as economic disruption, labor strikes, sabotage, assassination, clandestine aid and—in conjunction with the Main Intelligence Directorate (GRU) of the General Staff—the training of local groups for terrorism, guerrilla and "national liberation" struggles. The Soviet intelligence and security apparatus has available a number of special purpose forces for sensitive peacetime and wartime missions abroad. The Soviets have a tradition, dating from the Civil War period following the 1917 Revolution, of employing unconventional forces and methods. Special purpose units were used in the Soviet invasion of Czechoslovakia in 1968 to arrest the Czechoslovak leadership and secure key objectives in Prague, and they played an important role in the invasion of Afghanistan and the elimination of President Amin. Soviet unconventional warfare operations are supported by agent networks in the target country. The KGB and GRU recruit local nationals and place their own agents in vital areas of a nation's social and political structure, such as the military, ruling and opposition parties, the press, labor, key industries, local intelligence services and student groups. Local communist

parties, Soviet friendship societies, front organizations and leftist trade unions are often heavily funded by the Soviets and assist the USSR in consolidating its influence. Some of these operatives actively engage in subversion, while others are "sleepers," prepared to act only in the event of war. Both types are trained to operate as political agitators, intelligence collectors and saboteurs.

KGB subversive operations abroad are facilitated by allied Warsaw Pact and Cuban intelligence and security services. These services, which were either created by the KGB and its predecessors or are guided by Soviet advisers, often capitalize on diplomatic access or other overt types of presence denied to the USSR, and serve as useful "middlemen" for the execution of Soviet strategy.

KGB activities are aided by the official Soviet presence in the target country—embassies, consulates, journalists, trade organizations and military and civilian advisers. These entities not only pursue their normal overt functions, but also provide useful cover mechanisms for Soviet intelligence personnel. A large percentage of Soviets with diplomatic accreditation are KGB or GRU intelligence officers, and KGB operatives are present in every visiting political, economic, and cultural delegation.

Propaganda and disinformation are essential tools serving Soviet international objectives. The Soviet Union's application of overt propaganda and covert action techniques has been vividly demonstrated by its continuing attempts to prevent the deployment of US neutron warheads and to impede the modernization of NATO's theater nuclear forces.

Forces for Power Projection: The Soviets of late have been more aggressive in their use of military forces to project their power and influence. These activities have ranged from sizable Soviet and Cuban presence, including on-site

participation by the current Chief of Soviet Ground Forces, in Ethiopia during the war with Somalia, to the invasion of Afghanistan by Soviet troops in 1979.

In 1974 the late Minister of Defense Marshal Grechko wrote:

"The historic function of the Soviet Armed Forces is not restricted merely to their defending our motherland and the other socialist countries. In its foreign policy activity the Soviet state actively and purposely opposes the export of counterrevolution and the policy of oppression, supports the national liberation struggle, and resolutely resists imperialist aggression in whatever distant region of our planet it may appear. The party and the Soviet government rely on the country's economic and defense might in fulfilling these tasks....

The development of the external functions of the socialist armies is a natural process. It will continue."

Grechko's statement is an echo of a similar theme expressed in 1969 by Marshal Sokolovskiy in *Soviet Military Strategy*.

"We consider it our duty to support the sacred struggle of oppressed peoples and their just wars of liberation against imperialism. This duty the Soviet Union discharges consistently and steadily by helping the peoples in their struggle with imperialism not only ideologically and politically but materially as well. The USSR will render, when it is necessary, military support as well to people subject to imperialist aggression."

Airborne and Special Purpose Units: Because of their mobility, the Soviet Union's seven airborne divisions are particularly well-suited for the rapid introduction of combat forces into a foreign country. The Soviets threatened such

action in the Middle East wars of 1967 and 1973, and in 1979 airborne units were the spearhead elements of the move into Afghanistan. Airborne divisions remain at a high state of readiness. While lightly equipped and not suitable for operations against a well armed adversary, the combat elements of an airborne division, delivered rapidly to a distant region by Military Transport Aviation and Aeroflot aircraft could overwhelm the indigenous forces of a number of less developed countries, at least in the initial stages of an assault.



MIG-21/FLOGGERS in Cuba

The speed with which Moscow can deploy an airborne force depends on a number of factors: the distance to be flown, the level and type of expected opposition, the granting of overflight and staging/refueling rights, and the availability of logistic support. While Soviet long distance airlift capabilities continue to lag behind those of the United States, the Soviets could move, under optimum conditions, major elements of an airborne division to a country such as Syria in three-to-five days. Utilizing its substantial geographic advantages, however, the USSR could attack vital regions such as Iran and the Persian Gulf with massive ground and air forces staging directly from the Soviet homeland and secured contiguous areas. The only constraint



Libyan Tu-22/BLINDER Supersonic Bomber

to the overt application of Soviet military forces in a number of less-developed nations—assuming the lack of success of more indirect means of penetration and takeover—is the USSR's assessment of the Western response.

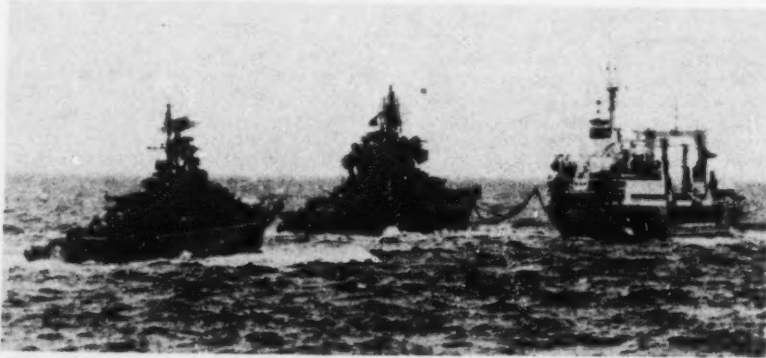
The Soviet Navy: The Soviet Navy has proven to be the most effective force thus far in projecting power beyond the USSR's borders. Admiral of the Fleet Gorshkov has written:

"The Soviet Navy is an instrument of a peace-loving policy and the friendship of peoples, a policy of suppressing the aggressive aspirations of imperialism, deterring military ventures and resolutely

counteracting threats to the security of the peoples on the part of imperialist powers.

"With the appearance of the Soviet Navy on the ocean expanses, the Soviet Union has been given new, wider potentialities for using the fleet in peacetime to support the country's state interests. And these potentialities are being successfully realized."

Since 1966 there has been a dramatic increase in Soviet port visits focused on the Mediterranean, the Indian Ocean and the coast of West Africa. Since 1967, the Soviets have established a number of forward naval deployments which provide the nucleus for augmentation during periods of tension. The Mediterranean and, most recently, the Indian Ocean squadron in 1980, have both been reinforced to counter Western navies during times of crises. These deployment patterns demonstrate the Soviets' capability rapidly to assert their interests in



A KRESTA II-Class Guided Missile Cruiser and KRIVAK II-Class Missile Frigate replenish from a Soviet oiler on the high seas.



Libyan FOXTROT-Class Attack Submarine

regions far from the Soviet Union's borders.

The USSR operates the largest fishing fleet in the world, with nearly 4,000 oceangoing ships. This fleet provides various types of support to Soviet naval units, including modest logistics aid and intelligence reports on Western naval units. The Soviets have also exported a substantial amount of fishing equipment and technology to Third World nations and entered into a number of agreements with 18 nations to help them develop their own fishing industries.

The Soviet merchant fleet has also grown considerably in the past decade, more than keeping pace with major Western shipping firms. Soviet market calls at Third World ports have increased by 60 percent in the past decade. In addition to its important economic activities, the merchant marine has also been used to ship Soviet arms to client states on a routine basis and during times of crisis. The addition of 40 roll-on/roll-off ships, which can unload cargo via large ramps, has increased the capability of the Soviet Union to deliver military cargo such as tanks to ports without sophisticated cargo handling facilities. In a contingency these ships could be used to support Soviet amphibious operations.

The merchant fleet also provides logistic support to Soviet naval units on a regular basis, particularly to units that are deployed to distant regions. Merchant ships possess an important advantage in that they can obtain water, fuel or food in ports which might be denied to warships or auxiliaries, thus giving the Soviets an addi-

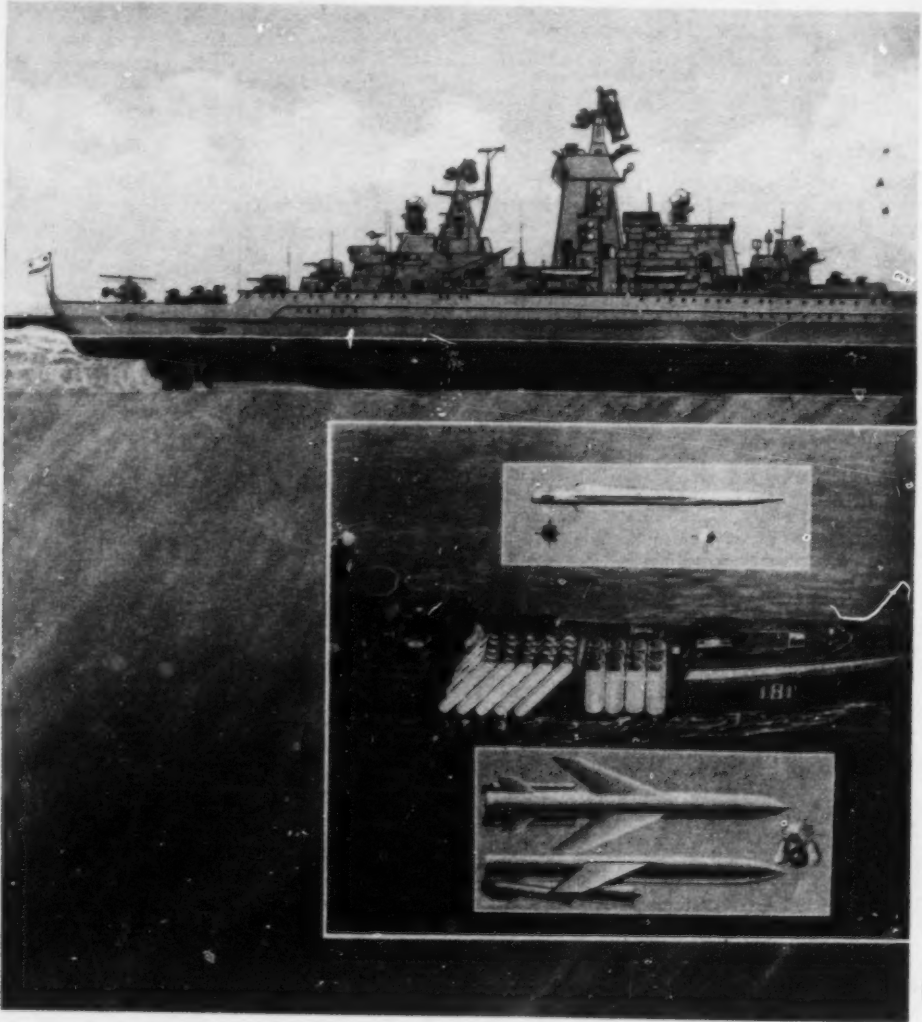
tional degree of flexibility in support of their forces.

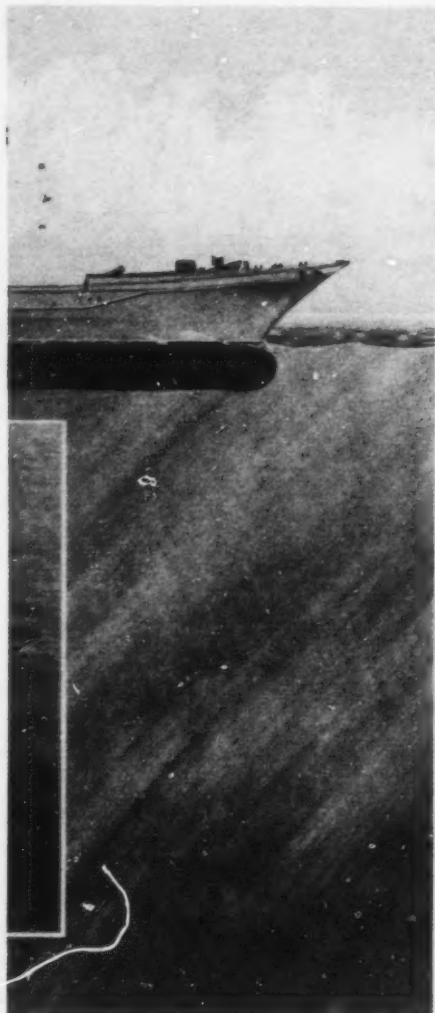
The Soviet Navy views access to support facilities and protected anchorages as an important adjunct to their operations in distant areas. Currently, the Soviets have access to such facilities in South Yemen, Ethiopia, Vietnam and Cuba and have recently made their first naval port call to Libya.

Access to foreign naval and air facilities has improved Soviet capabilities to monitor and counter Western naval units in the Atlantic and Indian Oceans and in the South China Sea. Soviet naval and antisubmarine warfare aircraft routinely deploy to nations offering such facilities to conduct surveillance and training missions. Access to air facilities in South Yemen and Ethiopia has been particularly useful for the Soviets in gathering intelligence on US naval units in the Indian Ocean and has improved their ability to conduct strike operations in this region. The operation of these aircraft from client state facilities gives a further visible presence to Soviet military power and influence in the region.

Distinct from enhancing the USSR's military capabilities, access to facilities also has important political utility. Political considerations certainly played an important part in Moscow's shift from supporting Somalia to aiding Ethiopia in 1977. Use of such facilities provides the Soviets with a presence in the region which they can then exploit to serve their interests. A recent example was the transit of the Soviet aircraft carrier MINSK far into the Gulf of Thailand, a not very subtle attempt to pressure Thailand to accept the Vietnamese invasion of Kampuchea. The USSR will continue to use the power projection capabilities of its military forces as well as other tactics to support Soviet political-military objectives and those of USSR client states.

VIII THE CHALLENGE



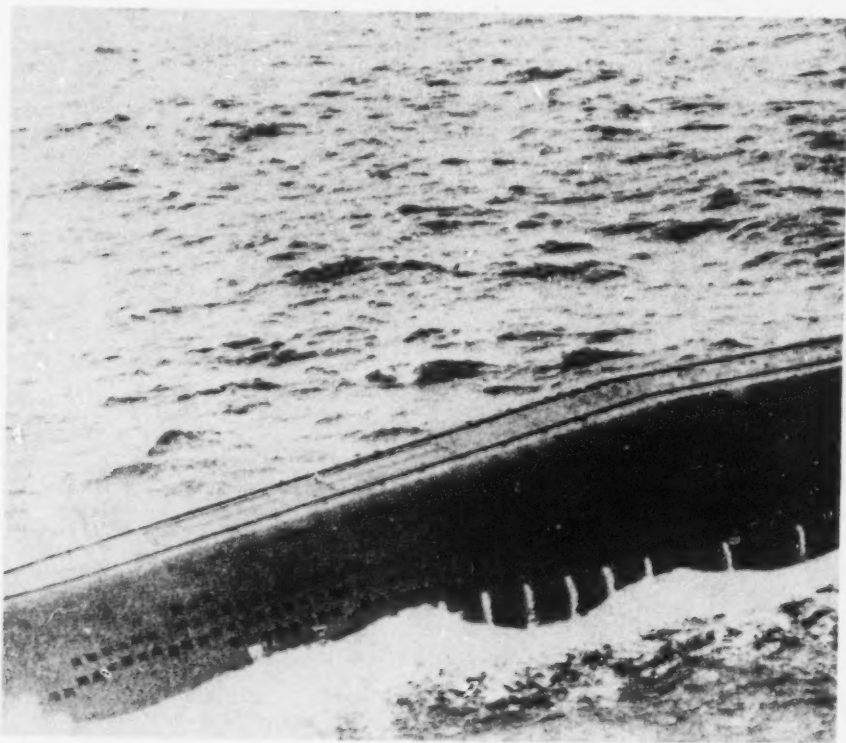


The Soviets begin the 1980s with strategic nuclear, theater nuclear and conventional armed forces and supporting elements that in both absolute and relative terms are substantially more capable than they were at the beginning of the 1970s.

The Soviet leadership, the key members of which have shepherded these forces for over 20 years, places great stock both in the international political influence and in the reality of military power that the forces underwrite in concert with other less visible means in the struggle with the West. In developing and deploying their strategic nuclear forces, the Soviets have subscribed neither to Western notions of strategic sufficiency nor to the concept of assured destruction. Instead, while they believe that nuclear war and its debilitating results must be avoided, they see the development of superior capabilities wedded to a strategy designed to achieve military victory and a dominant postwar position as the only rational approach to nuclear forces. The Soviet Union now exceeds the United States in the number of strategic nuclear vehicles. Soviet SS-20 theater nuclear forces are being deployed in increasing numbers against Western Europe and Asia.

As a result of a decade of missile force modernization and expansion, the Soviets have improved the reliability, payload and accuracy of their ballistic missiles allowing an improved hard-target kill capability. All evidence indicates that the Soviets will continue their steady effort to improve the quality of their land-based

KIROV, the USSR's first nuclear-powered surface warship, symbolizes the increasing strength of the Soviet Armed Forces and the increasing projection of USSR military power around the world. The KIROV carries 20 new-type long-range cruise missiles, and includes 12 vertical launch tubes for surface-to-air missiles in her heavy suit of weaponry.

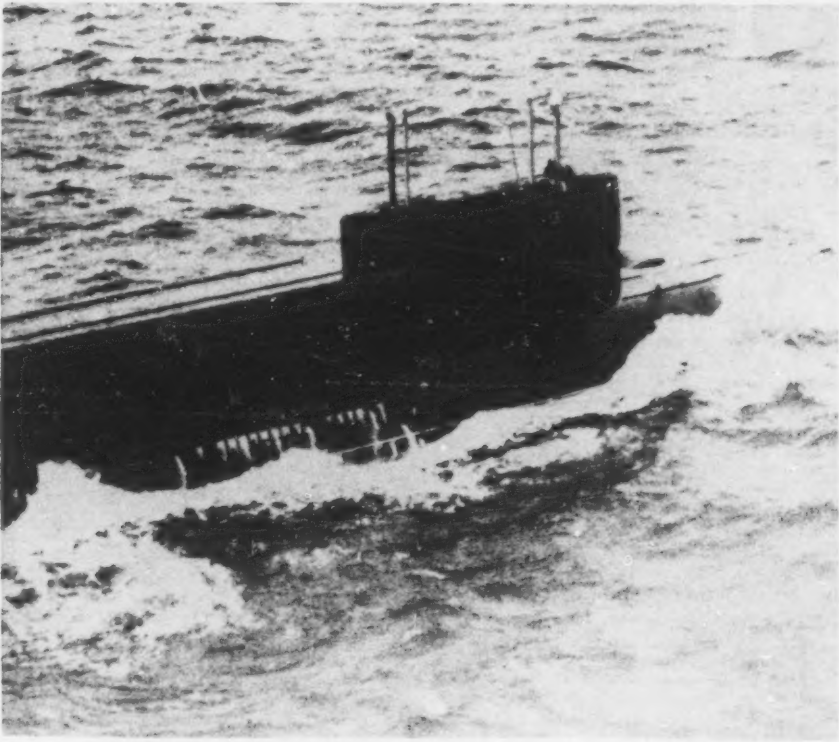


The ballistic missiles of the DELTA III-Class SSBNs have a range of 7,500 kilometers.

missile force, striving for higher reliability, faster response time and greater accuracy.

In the last ten years, the Soviets have introduced four classes of new ballistic missile submarines. The long-range missiles of the

DELTA-Class SSBNs can reach the United States while still in Soviet ports. The Soviets now have over 30 operational DELTAs. The SS-N-18, a missile installed in the DELTA III, has a range of about 7,500 kilometers and a post-



boost vehicle capable of dispensing MIRVs. The TYPHOON SSBN, twice the size of the DELTA, has been launched and will be deployed in the 1980s.

Throughout the past decade, the Soviets have

maintained their heavy-bomber strike force and have developed and deployed the BACKFIRE bomber capable of both theater and intercontinental delivery. Evidence would indicate that the Soviets are in the process of developing a

new long-range bomber, and possibly a strategic cruise missile carrier.

In the tactical ballistic missile field the 40-mile FROG and 500-mile SCALEBOARD short-range ballistic missile systems were replaced by or augmented with the newly developed SS-21 and SS-22 SRBM systems. Soviet tactical missile systems of the next decade can be expected to incorporate new technology to make them lighter and more mobile, more accurate and more responsive.

During the 1970s, new generations of Soviet infantry weapons—assault rifles, antitank grenade launchers and multiple rocket launchers with greater range and lethality—were introduced. Heavily armed helicopter gunships now number in the thousands.

Over the past ten years the Soviets have expanded their ground forces to more than 180 divisions. The Soviets today have superior ground forces in Europe. They have a substantial advantage both in number of troops and quantity of armored assault vehicles.

During the 1970s, the Soviets fielded two new tanks, the T-64 and T-72. Both exhibit significant improvements in firepower and protection which place them in a family apart from previous Soviet tanks. The Soviets are now experimentally producing a T-80 tank which will likely fire improved ammunition and incorporate further improved armor to meet the West's deployment of the 120-mm gun.

A new generation of Soviet antitank guided missiles was fielded in the mid-1970s to replace the manual systems of the early 1960s. The new antitank weapons are semiautomatic, more accurate, tube-launched systems with greater range and increased armor penetration. The design objectives of future Soviet antitank missiles will emphasize improved armor penetration and fully automatic guidance and control.

In the early 1970s, different Soviet self-propelled artillery pieces began to appear—first the 152-mm self-propelled howitzer, then the 122-mm self-propelled howitzer which, like the BMP all-purpose infantry fighting vehicle, is amphibious and has a nuclear, biological and chemical air filtration system. The 152-mm and 122-mm self-propelled artillery have ranges of over 17 kilometers and 15 kilometers respectively. The trend of at least six Soviet artillery, mortar and cannons developed in the past decade appear to be continuing in the 1980s. Continued application of the self-propelled design principle to different cannon and rocket artillery can be expected in the 1980s. Additionally, ammunition improvements will be made to achieve ever greater range and lethality.

Over the past 10 years, the Soviets introduced two new versions of the VICTOR nuclear-powered attack submarine (SSN) and developed the ALFA high-technology attack submarine. In 1980, the Soviets produced OSCAR, the prototype of a new class of nuclear-powered cruise missile attack submarine (SSGN) which is about twice the size of any previous SSGN. High Soviet priority is being devoted to antisubmarine sensor technology applicable against ballistic missile submarines.

The Soviets have produced two new classes of air-capable ships, the MOSKVA-Class helicopter cruiser and KIEV-Class VSTOL carrier. The Soviets are expected to have a new larger class of carrier, capable of handling conventional aircraft in the late 1980s.

Four new classes of Soviet surface combatants are entering service. The most capable is the large, multipurpose KIROV-Class nuclear-powered guided missile carrier. These new surface combatant classes are to be outfitted with new suits of advanced weapon systems. The Soviets are expected to continue to develop ma-

for naval combatants during the 1980s.

New Soviet ships and supporting auxiliaries reflect a thrust toward power projection capabilities at increasingly long ranges. The Soviet fleet is working constantly to introduce modern and sophisticated sensors and weapon systems, especially defensive missiles and cruise missiles.

Over the past decade the West's air superiority over Europe has been eroded by the capable aircraft being deployed in Soviet Air Defense Forces and Frontal Aviation. In the past decade, the Soviets introduced three types of new aircraft designed for the ground attack mission.

During the 1980s, the Soviets are expected to give high priority to the development of new fighter aircraft for both the ground attack and air superiority missions. They are expected to deploy precision guided munitions which use laser or antiradiation homing guidance. Improved navigation systems as well as more accurate bombing/navigation radars are expected to improve the all-weather capability of Soviet ground-attack aircraft.

During the past decade, the Soviets deployed a wide variety of new all-weather air defense intercept fighters. New Soviet interceptors, such as the Modified FOXBAT will be the Soviets' first look-down/shoot-down fighter. Armed with four new AA-X-9 missiles and possibly four shorter-range infrared air-to-air missiles, it will

be able to detect, track and engage targets at very low altitudes. The Soviets are expected to deploy a new airborne warning and control system (AWACS) to replace the Tu-126/MOSS, beginning in the mid-1980s.

The trend of improving surface-to-air missile air defense coverage is expected to continue through the modification of existing systems and the introduction of new systems, enhanced by improved command and control procedures to avoid destroying friendly aircraft while rendering the airspace over the ground forces virtually impenetrable to enemy aircraft.

The Soviet Union is intensely engaged in a program designed to achieve a dominant role in space. Soviet space projects have matured into well-integrated systems contributing further to the Soviet military effort.

The Soviet Union's research and development priorities and continued expansion of military industrial production capabilities are keyed to supporting continuing military growth and modernization. In turn, the combined capabilities of the Soviet Ground Forces, Strategic Rocket Forces, Air Forces, Air Defense Forces and Navy are keyed to assisting the projection of Soviet power abroad and the spreading and solidifying of the Soviet Union's political, economic and military influence around the world. This is the challenge we face.

DEPARTMENT OF DEFENSE AUTHORIZATION FOR APPROPRIATIONS FOR FISCAL YEAR 1983

MONDAY, FEBRUARY 8, 1982

U.S. SENATE,
COMMITTEE ON ARMED SERVICES,
Washington, D.C.

ECONOMIES AND EFFICIENCIES IN THE DEFENSE BUDGET

The committee met, in open session, pursuant to notice, at 10:14 a.m., in room 1202, Dirksen Senate Office Building, Senator John Tower (chairman), presiding.

Present: Senators Tower, Goldwater, Warner, Humphrey, Cohen, Quayle, Denton, Stennis, Cannon, Byrd, Nunn, Hart, Exon, and Levin.

Staff present: Rhett B. Dawson, staff director and chief counsel; Francis J. Sullivan, minority staff director; James F. McGovern, general counsel; Anthony J. Principi, counsel, Paul C. Besozzi, minority counsel; Christine E. Cowart, chief clerk; Brenda K. Hudson, assistant chief clerk; Louis W. Arny, Michael B. Donley, Robert S. Dotson, Frank J. Gaffney, George K. Johnson, Jr., David S. Lyles, José E. Martinez, Patrick L. Renehan, Carl M. Smith, Kathleen Troia, Richard D. Finn, professional staff members; Drew A. Harker, Mark B. Robinson, Ralph O. White, Jr., research assistants; Gerald D. Strickler, printing and documents clerk; Ann E. Sauer, special assistant; and Kimberly A. Manning, staff assistant.

Also present: Dennis P. Sharon, assistant to Senator Goldwater; Buzz Hefti, assistant to Senator Warner; George Kohl, assistant to Senator Humphrey; Jim Dykstra, assistant to Senator Cohen; Jon Etherton, assistant to Senator Jepsen; Don Ingram, assistant to Senator Quayle; Paul Schreiber, assistant to Senator Denton; Faisal Keblawi, assistant to Senator Thurmond; Robert Nichols, assistant to Senator Jackson; Frank Krebs, assistant to Senator Cannon; Gray Armistead, assistant to Senator Byrd; Arnold Punaro, assistant to Senator Nunn; Greg Pallas, assistant to Senator Exon; Peter Lennon, assistant to Senator Levin; and Bill Lind, assistant to Senator Hart.

OPENING STATEMENT BY SENATOR JOHN TOWER, CHAIRMAN

Chairman TOWER. The committee will come to order.

The committee meets this morning to continue hearings on the Department of Defense budget request for fiscal year 1983. Last Tuesday the committee received a preview of the President's fiscal year 1983 budget from Secretary Weinberger.

Today we are pleased to have before us the Deputy Secretary of Defense, Mr. Frank Carlucci and the Departmental Comptroller, Mr. Jack Borsting. In addition, we have Mr. David Chu, Director of Program Analysis and Evaluation and Mr. Joseph Sherick, Assistant to the Secretary for Review and Oversight.

My views on the defense budget are no secret. The need for more investment now is clearly linked to a lack of investment in the past. In a more fundamental sense, today's defense requirements are driven by the capabilities and ambitions of our principal adversary and the disparities between us which have grown dramatically over the last decade. It is not enough simply to recognize these disparities. We must act upon them in a rational, calculated way.

In presenting a budget of this size amid rising economic controversy, the President has chosen the statesman's courageous course, reaffirming that our level of effort will be tied to those requirements necessary to meet the threat.

In Secretary Weinberger's words of last Tuesday:

We need steady acquisition programs and we need to not look at these problems in 1-year slices or between rather narrow 12-month boundaries. To get the best value in terms of cost and surge capability we need steady acquisition programs in which everyone can have confidence that they will continue regardless of what other events may be taking place.

PRESIDENT'S COMMITMENTS TO BUDGET

In my view, the President is making three key commitments in this budget:

First, the President has determined that it is more prudent to pay for fixed and recurring costs up front rather than, as too often has been the case, allow requirements for modernization to undermine funding for near-term readiness.

Second, he has devoted planning and resources for both near-term and long-term requirements signaling a serious effort to solve chronic defense problems.

Third, he has renewed the commitment made last year for more stability in defense programing and execution.

These are all worthy objectives and should be cause for reflection among those in Congress who might be contemplating some radical surgery on the defense budget after having cast their votes last year to rebuild our Nation's defense capability.

To be sure, I do not advocate that we abdicate our responsibilities. The budget will be scrutinized as never before. This will involve canceling or altering programs which are not cost effective.

Last year, as in the past under Chairman Stennis' leadership, we found some programs, such as the *Oriskany* aircraft carrier, the C-X airlift aircraft and the Army's SOTAS helicopter not to be meritorious. On the other hand, the committee took the initiative in some areas such as command, control, and communications, a crucial link in our strategic deterrent, and added funding.

SAVINGS AND COST AVOIDANCE

This morning I signed and sent a request to Comptroller General Bowsher to conduct audits of the validity of three of the savings or

cost avoidance areas suggested by Secretary Weinberger last Tuesday.

These audits are, first, a review of the \$5 billion savings in fiscal year 1983, second, the claimed \$753 million that might be saved by authorizing two nuclear aircraft carriers this year and, third, a review by GAO of each and every contract proposed to be put into multiyear procurement in the next fiscal year.

In short, there must be greater emphasis placed on the accountability of this administration, as well as the Congress, for the efficient execution of defense resources.

The budget which leaves the Congress this summer will be different from that which is before us this morning, but its overall shape and direction must remain intact if we are to fulfill the commitments to get the best return for our defense dollar.

Senator Stennis?

Senator STENNIS. Mr. Chairman, I know we want to hear the witnesses. I will have a few remarks to make when its my turn to ask questions.

Chairman TOWER. Thank you, sir.

Mr. Secretary, you may proceed as you see fit. You have others with you this morning and you may present them at anytime during your presentation. Your statement will be printed in full in the record. If you choose to summarize it, you may.

STATEMENT OF HON. FRANK C. CARLUCCI III, DEPUTY SECRETARY OF DEFENSE, ACCOMPANIED BY HON. JACK R. BORSTING, ASSISTANT SECRETARY OF DEFENSE (COMPTROLLER); JOSEPH H. SHERICK, ASSISTANT TO THE SECRETARY OF DEFENSE FOR REVIEW AND OVERSIGHT; DAVID CHU, DIRECTOR, PROGRAM ANALYSIS AND EVALUATION, OFFICE OF THE SECRETARY OF DEFENSE

Mr. CARLUCCI. Thank you, Mr. Chairman, and members of the committee.

I appreciate this opportunity to appear before you to discuss economies and efficiencies in the defense budget.

I will submit my statement for the record, Mr. Chairman, and make some brief comments at this time.

Let me say, first of all, Mr. Chairman, that we welcome the scrutiny that you talked about, we welcome the GAO audits, and we look forward to the hearings on this budget before the Congress.

MANAGEMENT AREA OF DEFENSE

We are hearing, even today, talks of cuts in the defense budget before the ink is barely dry on the overall budget. I would hope that people who talk this way have not drawn conclusions before they have had an opportunity to look at the facts and to listen to what we are doing in the management area in defense.

The testimony that we are submitting for the record today lays this out in some detail. Not only have we laid out what we are doing but we have taken the process one step further. We have committed ourselves to certain savings by budgeting for them.

In total we have budgeted for \$51 billion in savings through 1987. What this means is that if we don't achieve these savings we must reduce programs by a corresponding amount.

I have characterized this budget as a reform budget. Previous Defense Department budgets have had a tendency to be underpriced, underestimated, and underfunded and we have heard about this in no uncertain terms from the Congress. This budget is an effort to be responsive to your concerns. But to do so we will need your cooperation.

We are going to tell you very honestly what the Defense Department program will cost and we will put the money up front, but it will not be easy for you as you look at this budget. Such things as full funding, multiyear contracting, program termination, consolidations, base closings, and weapons skills are all controversial items. But I would hope that before the members look for other savings in the budget they will review the savings that we have put in the budget to make certain that we can achieve them.

You are familiar with the overall figures. In real terms TOA in this budget is \$258 billion, up 13.2 percent. Outlays, on the other hand, are up only 10.5 percent, to \$215.9 billion. The discrepancy is due to what I just referred to, an honest effort to present to you the full costs of a 5-year program and to present it up front.

Of the \$43.7 billion current dollar increase in TOA in 1983 one-third is inflation, one-third is management initiatives, and one-third is new programs. As a result of putting these management initiatives up front, even though TOA goes up at a sharp amount in 1983, it goes up at a much lesser amount in 1984, some 4.6 percent compared to the 13.3 percent that I mentioned.

The testimony lays out for you what we intend to do. Let me try and cut through some of the jargon and lay it before you in simple terms.

First of all, we have simplified our internal management system.

Second, we intend to buy things in a better way. We are going to put the right price tag on them. We are going to estimate inflation more accurately, we are going to full fund, we are going to budget the most likely costs, we are going to contract over longer periods of time, and we are going to buy in economical units.

Third, we have established a vigorous inspection and audit system.

Fourth, we have put on tighter internal controls over such things as travel, logistics, and consultants.

Fifth, we have set up an overall management mechanism to oversee the process.

Now just a word about each of these five categories.

BUDGETING SYSTEM

The PPBS system, the management system, the budgeting system. When we came to Defense we found that the budget had a tendency to drive planning instead of vice versa. We have turned this around. We have placed great emphasis on planning at the front end. We have reconstituted the Defense Resources Board, bringing in the service secretaries and service chiefs, so it is indeed the top collegial management body of the Department of Defense.

This year for the first time we brought in the CINC to get their views on both strategy and budget. We have better defined rules. We have set up a Strategic Concepts Development Center to do some long-range thinking for us and we have made intensive efforts to link the budget process to the weapon acquisition process, something that was not done before. As a result, the budget that you have before you reduces or terminates at least 60 programs for savings of \$1.1 billion in 1983 extending out to over \$6.2 billion through fiscal year 1987.

We moved early on with 32 initiatives to reform the acquisition cycle. Before I get to that let me just spend a minute on what does cause cost overruns.

Seventy percent of the cost overruns of our major systems last year were due to inflation. This budget has a major innovation in it. We are pricing our major weapons systems, some nine procurement accounts, on the basis of actual defense experience with inflation. This means that we have added some \$2.1 billion in 1983 over what the normal calculation for inflation would have been. Extending out over the 5-year period, out to 1987, we have added a total of \$38.9 billion for more accurate pricing, more accurate estimates of inflation.

The use of more realistic inflation guidelines for the 1983 budget will explain in part the sudden cost growth for some of the programs being reported to you in response to Nunn amendment requirements.

In that regard I would like to point out that we will not be seeing anything in these initial reports that would not have been otherwise identified in the Selected Acquisition Reports. Moreover, these initial reports should be placed in the proper historical context.

You will recall that the December 1980 SAR's which reflected the previous administration's 1982 budget reported \$47 billion in cost growth for 47 systems. This was an average increase of more than 18 percent in program acquisition costs. For the military departments the Nunn amendment threshold is only 15 percent for unit costs.

When the programmatic and inflation changes normally experienced are added to our initiatives in the fiscal year 1983 budget to incorporate better estimates of future inflation and to budget to most likely costs, this budget will appear to cause breaches of the Nunn thresholds, especially since these thresholds are based largely on the previous administration's program plans.

In a word, Mr. Chairman, the irony is that because we are doing what we think the Nunn amendment directed us to do we will find ourselves breaching the Nunn amendment thresholds more readily than might otherwise have been the case.

Other reasons for cost overruns are underestimates, hidden costs, and changes in programs. To deal with these we have encouraged the services to budget to most likely costs. The buy-in has been a constant practice in the past, not just on the part of contractors but on the part of program managers.

This year we reviewed the cost estimates very closely and actually added money where we thought the services were underestimating. The total that we added was several billion dollars. Typically

the underestimating occurred in such areas as test hardware, readiness, and technology changes. Indeed, in some programs that we are presenting to you we will have special reserves for technology changes.

We are moving ahead, as you indicated, Mr. Chairman, on multiyear contracting for an additional \$546 million in TOA that is in this budget. We believe we can save \$815 million. Hopefully, because we have chosen good programs, that \$546 million in TOA for termination liability will not have to be used. Hence, the \$815 million will be a net savings achieved through multiyear procurement.

We have given particular attention to economic production rates. We selected certain programs and deliberately added money to them or brought money up front so we could achieve economies in production. We added an overall \$3.4 billion which will bring us savings of \$2.3 billion and, of course, this is either money we would have spent otherwise or we get additional equipment for it.

We have made intensive effort to broaden the industrial base, we have stepped up progress payments, we have built into one weapons system program, the M-1 tank program, an experimental way of developing surge capability, we have added money for productivity, and we have increased our manufacturing technology program.

We have identified over 50 programs for preplanned product improvement to make sure we are using an evolutionary approach to weapons systems purchases and we have placed increased emphasis on competition. I can assure this committee that it is firm DOD policy to purchase required materials and services, including major weapons systems, on a competitive basis wherever this makes good sense.

In reviewing the major weapon systems currently reported to Congress in the Selected Acquisition Reports we find that for 42 of 48 the contractor was picked through a competitive source selection process, with the remaining 6 not having been directly competed for very good reasons.

For example, only one shipyard could build the CVN-71 nuclear carrier, we needed the size of the 747 aircraft to carry the equipment for the advanced Airborne Command Post and the CH-47 modification program could be most cost effectively done by the original helicopter contractor. But I can assure you we are moving ahead vigorously in the area of competition.

Equally, we have placed a great emphasis on cutting down on fraud and waste. We have established the position of Assistant to the Secretary for Review and Oversight. The incumbent, Mr. Joseph Sherick, is here with me today and is prepared to answer questions.

His program is a multifaceted and vigorous program. It consists of stepping up our audit program significantly, laying out deadlines and procedures for audit resolution, including similar reviews for our contract audits, and emphasizing the hotline whereby people can call in, on an anonymous basis, and identify any abuses or inefficiencies. Hotline calls have numbered about a thousand over the last 9 months of 1981. They have established the new Defense Criminal Investigative Service to concentrate on so-called white collar crime. We have also established closer relations with the Department of Justice to deal with this problem.

In the area of internal operations we have established much tighter controls. We have curtailed travel and expect to achieve savings of some \$500 million over the 1981 to 1987 timeframe in the area of travel.

We have established a focal point for controlling the use of consultants and expect to save \$1.4 billion in the same timeframe in this area.

We have established tighter controls over logistics, we have moved ahead and decentralized some programs where it made sense to us and did not adversely impact readiness, and we plan to continue with a vigorous program of contracting out.

To summarize, in the acquisition initiatives we plan some \$2.4 billion in savings in the 1983 budget, extending to \$13.8 billion through the 1987 timeframe.

In the area of internal operations we plan \$1 billion in savings, extending to \$6.9 billion over the 1987 timeframe.

Added to this are government-wide compensation initiatives which will give us \$4 billion in savings in 1983, extending to \$31 billion through 1987.

This gives us a total of \$7.4 billion in TOA savings in 1983, extending out to \$51.5 billion over the entire 1983-1987 timeframe.

To oversee this entire mechanism we have set up the Department of Defense Council on Integrity and Management Improvement, which I chair. The purposes of this Council are to identify and pursue management improvements, serve as a forum for innovation, and assure vigorous followup of audit, inspection, and investigation activities.

In addition, we are applying hands-on management through a performance review mechanism where the Secretary and I sit down every week with various components of the Department and go over their programs in detail.

B-1B AND ATB PROGRAMS

We have also established a similar mechanism to review key programs such as the B-1B and the ATB program on a biweekly basis.

Our budget, it is true, is large, but if you look at the \$215.9 billion in outlays you will find that \$67.8 billion of that, or 31 percent, is money spent out as a result of TOA from prior years, and \$133 billion, or 62 percent, is for immediate operations, personnel, and O. & M. money. Only \$15.7 billion, or 7 percent, is for R. & D. construction and procurement. To cut this \$15.7 billion requires enormous program cuts.

Coming in on Saturday I saw an article in the New York Times which talked about the enormous costs of certain weapons systems. It listed the B-1 for \$4.8 billion, the MX for \$4.5 billion, cruise missiles, \$900 million, nuclear carriers, two of them, for \$6.8 billion, and a Trident submarine for \$2.5 billion. My total for that is \$19.5 billion, but that is TOA and it spends out very slowly.

I asked my staff to look at the savings you would get if you cut out all of those systems and I find that you would only get \$5 billion in outlay savings in 1983. The fact is that there are no easy cuts. We can, of course, reduce our capability, but we think this is risky in light of the threat that our Nation faces.

We hope that those who talk about across-the-board cuts or waste in DOD will take a close look at what we are doing and will address some of the fundamental questions that we have laid out in our testimony today.

I and my colleagues would be glad to attend any hearings on this subject or give the members or their staffs any briefings that they might like to have.

Thank you, Mr. Chairman.

[The prepared statement of Deputy Secretary of Defense Frank C. Carlucci follows:]

PREPARED STATEMENT OF THE DEPUTY SECRETARY OF DEFENSE FRANK C. CARLUCCI

Mr. Chairman, members of the committee, I appreciate the opportunity to meet with you today.

When the Reagan administration began its work a year ago, one of our major concerns was the need to shore up America's national defense. We believed then and believe now that the preservation of a free society and the world environment in which that society can prosper is dependent on a credibly strong defense establishment.

Secretary Weinberger last week presented to you our view of the threat to peace. I will not repeat that now other than to reiterate our great concern about the potential for instability inherent in many corners of the world and particularly the instability associated with the unabated growth of Soviet military power.

Because of this concern, we have greatly strengthened our strategic and long range planning process to assure that we consider fully the long-range implications of the actions, programs and budgets that we are proposing.

As we considered these implications, it soon became obvious to us that we do not have enough resources to meet all possible contingencies. Through an iterative process of review, we have made a number of tough—and we think correct—resource decisions to provide the means to improve our military capabilities.

The budget request for fiscal year 1983 submitted to you on February 8 reflects some of these decisions. Approximately one-third of the \$43 billion increase in Total Obligational Authority is keyed to management reforms that will result in significant savings, far in excess of these expenditures, over the five-year program. I want to assure you and, through you, the American people whom you represent, that those of us appointed to develop and implement policy in the area of national defense are keenly aware of our special responsibility to use wisely the resources provided to us. We take seriously our obligation to present an "honest budget", capable of being weighed objectively on its merits.

This honest budget is reflective of our approach to the management of the Department of Defense, for it is only through a strict adherence to sound principles of efficient and effective management that we can best provide to American citizens a dollar's worth of Defense for each tax dollar so allocated.

In the past year, we have initiated a series of programs and actions to strengthen the management of, and eliminate waste and inefficiency in, the Department of Defense. I would like to report to you today on the progress we have made in the following areas:

- Reform of the strategic planning, programing and budgeting process;
- Reform of the weapons acquisition process;
- A major attack on fraud, waste and abuse;
- Economies and efficiencies in a number of internal management operations; and
- Other management actions including the creation of a Management Improvement Council and its program.

PLANNING, PROGRAMING, AND BUDGETING

We have made major strides in improving the DOD Planning, Programing, and Budgeting System (PPBS)—The major decisionmaking system in the Department. We have redesigned and greatly strengthened the strategic planning process so that our major budget decisions are driven by the best possible analysis of the threat, the likely contingencies and the gap between current capabilities and our needs. The decisionmaking process is thus on the way to being driven by long-range planning and not by the amount of money we happen to have available today.

We have expanded the use of the Defense Resources Board as the primary DOD Planning and decisionmaking body—the Corporate Board, if you will. There is full participation on all major planning, programming and budgeting discussions by the Under Secretaries, the Assistant Secretaries, the Service Secretaries and the Chairman of the Joint Chiefs. The four Service Chiefs of Staff have also been invited to participate. Not only do we get the benefit of input from all the top leadership in DOD—uniformed and civilian—but we also gain full understanding and backing once a decision is made.

At the same time, we have expanded the sources of military advice available to the DRB. For the first time, the Unified and Specified Commanders (CINCS) were called in from all over the world to give the DRB their views. The CINCS provided their views to the DRB at the start of our budget deliberations, and at the start of our long-range planning sessions.

Roles have also been better defined. The Office of the Secretary of Defense provides broad policy instruction and the Services respond with detailed analyses. This has eliminated much confusion and duplication. We have reduced paperwork requirements as well.

To assist us in the strategic planning process, we have recently established a Strategic Concepts Development Center at the National Defense University. The Center's staff of high quality civilian and military personnel will perform conceptual work and provide advice on a wide range of strategic issues to the Defense Department leadership and other interested Federal officials. Secretary Weinberger and I have already begun to task the Center for direct support on defense strategy and we, together with the Chairman of the Joint Chiefs of Staff, intend to continue to draw upon this resource for independent reviews, long-range planning initiatives and special projects dealing with military strategy.

In the past, weapon system acquisition decisions and budget decisions were not always well coordinated. We have made a major effort to improve the coordination of the PPBS process with the weapons acquisition system. The second most important decisionmaking system in DOD. This has been reflected in decisions we have made to delete or restructure some 60 existing and new start programs of lower priority which, although desirable, added less to our overall military capabilities than holding to our schedules and configurations for those other programs where funds were added. We estimate total savings resulting from these actions to be approximately \$1.2 billion in fiscal year 1983 and \$7 billion for the 5-year program.

In this connection, I would like to emphasize the special attention we have focused on "New Start" programs in order to streamline and better integrate the acquisition process with the PPBS. We have begun an annual review of major system new starts beginning with the fiscal year 1983 program and budget review. This review addresses such areas as justification for a major system new start, consideration of affordability issues, technological status of the concept, and the priority of these projects relative to ongoing efforts. Our first annual review resulted in disapproval or restructuring of 6 of 16 programs proposed by the Services.

WEAPONS ACQUISITION PROCESS

The weapons and other equipment developed for and acquired by the military services are the subject of much public scrutiny and rightly so, since the quality and quantity of the tools we place in the hands of our service men and women contribute both to their individual prospects for survival in conflict and to the security of us all.

Soon after taking office a year ago, Secretary Weinberger and I launched a comprehensive review of the Defense Acquisition Process, with a view toward the reform of its management. The review sought to identify specific ways to reduce costs, to make the acquisition process more efficient and time sensitive, to increase the stability of our programs, and to revitalize our defense industrial base. In April, we incorporated our findings and recommendations into a DOD "Acquisition Improvement Program". Recognizing that many of our 32 management initiatives would require time and the cooperation of other agencies and Congress, we immediately began to implement those over which we had direct control and have included these in our budget request. Although we are still at an early stage in our reform effort, I would like to highlight a few areas of our program and identify, where possible, the savings to the taxpayer which can already be quantified.

Before doing that, however, I would like to address the issue of cost overruns, which represents a major threat to the credibility of the Defense Department and to the consensus that supports the Defense budget. An important fact that is sometimes overlooked in discussion of this issue is the role of inflation. Last year, for

example, inflation accounted for about 70 percent of the total cost growth for our major systems. We believe this problem can be largely resolved by using inflation indices based on specific commodity price experience where inflation rates for such purchases have been significantly different from those in the general economy. We have added \$2.2 billion in fiscal year 1983 and \$38.9 billion for the fiscal years 1982-1987 period for just this purpose. I believe that these steps will move us much closer to effective control over cost growth.

The use of more realistic inflation guidelines for the fiscal year 1983 budget explains in part the sudden cost growth for some of the programs being reported to you in response to the Nunn amendment requirements. In that regard, I would like to point out that you will not be seeing anything in these initial reports that would not otherwise have been identified in the Selected Acquisition Reports (SARs). Moreover, these initial reports should be placed in the proper historic context. You will recall that the December 1980 SARs, which reflected the previous administration's fiscal year 1982 budget, reported \$47 billion in cost growth for 47 systems. This was an average increase of more than 18 percent in program acquisition cost. For the Military Departments the Nunn amendment threshold is only 15 percent for unit cost. When the programmatic and inflation changes normally experienced are added to our initiatives in the fiscal year 1983 budget to incorporate better estimates of future inflation, and to budget to more likely cost, this budget will appear to cause breaches of the Nunn thresholds, especially since these thresholds are based largely on the previous administration's program plans. In fact, the real test of the Nunn amendment and our attempts to control costs will be in the number of systems that breach these thresholds after these initial reports.

While we are not so naive as to think we have seen the last cost overrun—no management system can avoid that entirely—we are confident that full implementation of those Acquisition Improvement program initiatives designed to control costs will be of great assistance in our efforts to achieve better management in the future.

Let me now turn to a discussion of some of those initiatives and describe how we are making real savings. First, we have encouraged program managers to budget to most likely cost and to budget for technological uncertainty. The fiscal year 1983 budget request includes funds in R.D.T. & E. and procurement programs to cover areas of technological risk and unspecified but anticipated requirements for changes in equipment design or program cost increases. As an example, the Army has applied \$87.1 million in fiscal year 1983 R.D.T. & E. funding to 12 programs to provide for technological uncertainty and we have added several billion dollars to our major production programs so that they are funded to their most likely cost.

Table 1 provides more details:

TABLE 1.—BUDGET FOR TECHNOLOGY RISK

[In millions]

System	Total fiscal year 1983 R.D.T. & E. amount	Amount included for risk
Cobra TOW missile.....	\$12.2	\$1.0
Army helicopter improvement program.....	75.8	11.1
Patriot missile.....	27.5	5.8
Hellfire missile.....	19.3	12.0
Pershing II missile.....	111.3	29.3
M-1 tank gun.....	31.6	5.6
Tactical communications.....	7.9	1.8
MICNS data link.....	14.8	3.5
Position location reporting system.....	9.4	.5
Remotely piloted vehicles.....	73.2	14.4
NAVSTAR satellite ground equipment.....	11.9	1.0
Tactical satellite communications system.....	17.5	1.1
Total.....	412.4	87.1

Note: Amounts included in the right-hand column represent resources required to meet estimated technological risk for these programs.

In addition, front-end funding for procurement of adequate test hardware has been emphasized to further reduce the technological risk and avoid the need for expensive retrofits which could delay deployment or reduce our readiness levels.

We have stressed multiyear procurement to help realize savings through procurement in economical lot buys and more efficient use of production resources. The fiscal year 1983 Defense Budget includes 14 major multiyear procurement initiatives requiring \$546 million more in total obligational authority in fiscal year 1983 but saving \$815.4 million over the next 5 years after paying the required "up front" investment. It is important for the public to understand that increased fiscal year 1983 appropriations and outlays for multiyear contracts will let us buy the quantities involved for considerably less than if those programs were contracted for only one year at a time. While unexpended balances will be larger, these balances reflect sound fiscal policy and are no added burden on the budget.

Table 2 provides more details:

TABLE 2.—MULTIYEAR PROCUREMENT INITIATIVES

[In millions]

	Fiscal year 1983 TOA increase	Net 5-year savings
F-111 weapon navigation computer.....		\$9.9
C-2 aircraft.....	\$32.4	58.4
SM-1 Missiles.....	48.1	62.7
EA-6B aircraft.....	9.1	21.1
A-6E aircraft.....	5.0	20.3
NATO Seasparrow launcher.....	9.0	37.2
MULE laser designators.....	10.5	5.5
T-AO fleet oilers.....	109.8	66.5
MK-46 torpedoes.....	34.5	40.4
CH-53E helicopters.....	29.9	35.0
DMSP satellites.....	30.7	49.3
NAVSTAR GPS systems.....		249.3
MLRS rocket systems.....	53.2	64.0
Blackhawk helicopters.....	159.2	81.1
ALQ-136 radio jammers.....	14.5	14.7
Total.....	545.9	815.4

Note: Includes only the portion of fiscal year 1983 funds for these systems that was added to initiate multiyear contracts and thus attain the beneficial effects of the "savings" column.

Excludes F-16, and AN/TRC-170 radio programs which were initiated in fiscal year 1982 and should save an additional \$264.7 million over the 5-year period.

The "5-year savings" amount represents the savings above and beyond recovery of the fiscal year 1983 investment amount.

Next, in the area of economic production rates, we have found many instances where capacity exists, or will be financed by industry, to enable the production of the quantities of equipment required for Defense at higher rates and, therefore, at lower unit costs. During 1981, we held special meetings of the Defense Resources Board to make a special effort to take advantage of the possible increases in efficiency and unit cost savings that can result from higher, more efficient rates. We added \$3.4 billion in the fiscal year 1983 budget request to 14 selected programs in order to raise fiscal year 1983 rates (outyear production rates were raised as well) to more economical levels. As a result of these decisions, we expect to save \$2.3 billion during the next 5 years in procuring the quantity planned before the increase. Of course, we will also receive additional quantities of hardware during this period.

Table 3 provides further details:

TABLE 3.—ECONOMIC PRODUCTION RATES

[In millions]

	Fiscal year 1983 TOA increase	Net 7-year savings
AIM-9M missiles.....		\$74.2
E-3A aircraft.....		159.0
F-15 aircraft.....	\$1,072.1	42.6
RF-4 IR sensors.....	19.3	13.1
Defense satellites.....	207.2	64.0

TABLE 3.—ECONOMIC PRODUCTION RATES—Continued

[In millions]

	Fiscal year 1983 TOA increase	Net 7-year savings
AN/SSQ-47 Sonobuoys.....		3.2
AN/BQQ-5 Sonars.....		1.3
TSEC/KG-45.....	2.8	.8
SH-60B helicopters.....	55.7	217.5
CH-53E helicopters.....	81.8	20.9
Common ECM equipment.....	61.7	18.5
A-6E aircraft.....	109.6	58.4
EA-6B aircraft.....	169.6	36.8
F-14 aircraft.....	562.5	70.9
F-16 aircraft.....	435.8	747.0
Laser Hellfire missiles.....	130.0	189.8
Fighting vehicle systems.....	141.3	236.0
DIVAD gun systems.....	349.0	313.1
Total.....	3,398.4	2,267.1

Note: Includes only the incremental cost of the fiscal year 1983 quantities that were added to the previously planned buy in order to attain the beneficial economies shown in the "savings" column.

Savings accrue due to lower unit costs resulting from increased efficiencies gained by higher production rates.

In many cases, however, our industrial base is lacking in capacity or requires additional capital to operate efficiently. We are taking several initiatives to encourage defense contractor capital investment such as increasing use of milestone billings, providing more advance funding, expediting contract payment schedules, providing for profit levels more commensurate with risk and contractor investment and ensuring that these beneficial actions are extended to subcontractors.

In addition, we are also including funds in our fiscal year 1983 budget request to modernize the tools, equipment and facilities of our in-house production operations. We screen candidates for these productivity investment projects to select only those which will generate a significant return on investment. Specifically, we are requesting \$121 million in fiscal year 1983 for 72 projects which we expect to produce a 5 year savings of \$558 million.

Table 4 shows the distribution of these funds:

TABLE 4.—PRODUCTIVITY INVESTMENT FUNDING

[Dollar amount in millions]

	Number of projects	Fiscal year 1983 TOA	Savings	
			Fiscal year DP	Equivalent man-years
Army.....	34	\$33.5	\$243.0	2,595
Navy.....	28	41.8	150.4	594
Air Force.....	9	41.7	123.0	651
Defense agencies.....	1	4.0	41.0	22
Total.....	72	121.0	558.3	3,862

Note: These funds are to be applied to the modernization of the tools, equipment and facilities of Defense Department in-house production operations (for example, arsenals).

In a similar vein, we are budgeting an increased amount for manufacturing technology programs in order to improve factory floor productivity and thus reduce weapons system costs. The program for the next 5 years calls for doubling the level of funding for manufacturing technology from the \$0.7 billion spent from fiscal year 1978-1982 to \$1.6 billion in fiscal year 1983-1987. The fiscal year 1983 budget request contains \$6 million in R.D.T. & E., \$8 million in operations and maintenance and \$257 million in the procurement accounts for this effort. We plan to monitor our investment and demonstrate the cost effectiveness of this expenditure.

Beyond encouraging investment in a modern Defense Industry through more stable, efficient production programs and improved investment incentives, steps are

being taken to develop a production surge capability where economically feasible. For example, the pacing items for M-1 tank production are various components of the turbine engine and fire control system. By adding \$126 million to the fiscal year 1982 M-1 tank production program, we can increase the production rate of these pacing components for the fiscal year 1982 funded delivery period. A total of 180 tank sets of pacing components could then be "banked" for use to surge M-1 production at some future time.

These components could also be used to support the M-1 tank logistics base, if unanticipated problems develop in our repair/depot maintenance pipeline requirements. There would be no additional facilitization required since the surge could be accomplished with overtime and/or multiple shifts at existing and currently programmed facilities. We have included this "surge" program in our fiscal year 1982 supplemental request and plan to add others in the coming years.

During the fiscal year 1983 budget formulation, trial procedures were initiated to improve the visibility of program support funds in the budget. The procedures required that selected program managers provide to the Office of the Secretary of Defense separate budget backup material clearly showing all support funding required and budgeted for the program. These procedures heightened the awareness of all management levels of the interrelationship between support funds in various appropriations and other elements of program cost. I anticipate that we will expand these procedures in future years. In addition, we reviewed all programs to determine the adequacy of support funding.

We expect to derive additional cost savings from implementing our pre-planned product improvement program. The actions we have taken and plan to take under this initiative respond to the concern that we too often seek to incorporate overly advanced technology in our system. Pre-planned product improvement offers an evolutionary approach to system development that plans future system upgrades while proceeding with lower risk alternatives to meet near term needs. This enables us to provide for rational incorporation of increasingly sophisticated subsystems developed and proven over the service life of our weapons systems. The F-16 Multinational Staged Improvement Program is a current example of this approach. Improvements will be introduced into the F-16 aircraft at approximately the midpoint of production. Other examples of such programs are:

Joint Tactical Information Distribution System.—A December 18, 1981, Navy decision directed that the baseline requirement for this system be frozen and that additional capability not be added during engineering development. Additional capabilities, such as anti-jam enhancement, will instead be considered for future block changes.

Army Fighting Vehicle system (FVS).—Block improvement initiatives for fiscal year 1982-1985 include modification of fire control for TOW-2 missile integration, and hardening of the vehicle against chemical, biological and nuclear effects.

M-1 Tank.—The program includes a coordinated plan which integrates a 120mm gun upgrade with other block improvements. Savings are implicit in this approach since all the pre-planned modifications will be applied at the same time in the production schedule.

A list of candidate programs for additional application of pre-planned product improvements was prepared during last summer. These programs are now under review in connection with initial planning for the fiscal year 1984 budget.

I know of Congress concern about increasing competition throughout the acquisition process and I want to assure you that it is firm DOD policy to purchase required materials and services, including major weapons systems, on a competitive basis whenever this makes good sense. In reviewing the major weapon systems currently reported to Congress in the Selected Acquisition Reports (SAR), we find that for 42 of 48, the contractor was picked through a competitive source selection process, with the remaining 6 not having been directly competed for very good reasons. For example, only one shipyard could build the CVN-71 nuclear carrier; we needed the size of the 747 aircraft to carry the equipment for the advanced airborne command post; and the CH-47 modification program could most cost effectively be done by the original helicopter contractor.

Our efforts to pursue the benefits of competition do not stop there. In 24 of the SAR systems we contracted with two or more competitors for some or all aspects of the development program. In some of these systems, like the F-16 and A-10 aircraft, the Advanced Attack Helicopter, and the M-1 tank, we built competitive hardware for evaluation before entering full scale development. In others, such as the Multiple Launch Rocket System, DIVAD Gun, and Cruise Missile, we carried the competition through the entire development program. Even when we eventually get to a single development prime contractor, significant competition still takes

place at the subsystems and vendor levels for the majority of the effort. We currently have several systems with production competition at the prime and subcontract level and plan to add more in the future. In many cases we break out production subsystems for direct purchase by the Government. For instance, the Tomahawk cruise missile has, or will have, competition managed by the program office for virtually every major subsystem.

On the other hand, while we adhere strongly to the principle of competition, we recognize that, against the backdrop of our ultimate task of providing the best possible equipment at the most economic cost, in the shortest time, there will be instances when a directed negotiated contract can achieve our goals better than prolonged competition.

We can resolve some of the misunderstanding about the extent of competition in our procurement by improving our bookkeeping procedures. For example, the General Accounting Office recently suggested that a more appropriate way to record non-competitive contract awards would be to further break out the category into two separate categories entitled, "Non-Competitive, Potential" and "Non-Competitive, No-Potential". We are giving serious consideration to adopting this recommendation.

I would like to take a moment to reflect on the dynamics of innovation. In order to accomplish a meaningful reform of our acquisition management process, sweeping changes were required. We are dealing with a way of doing business that has evolved over many years. It has been molded by industrial imperatives, statutory requirements and bureaucratic exigencies. We began the task with a management review of the entire process culminating in the so-called 32 acquisition initiatives that we have been describing to you today. Our progress has been, I think, significant, considering the reforms were only started 9 months ago. Many people in the Defense Department have worked mightily to help make those changes we have all recommended—it was an internal reform effort. Many of you in Congress have been very helpful in providing legislative relief where required, such as revising contract thresholds and confirming our multiyear approach. We know that an undertaking as broad and fundamental as we have proposed will take time and we know that the key to success is the sustained and serious interest of decision makers, both in Defense and in Congress. We appreciate your support and I pledge that, for our part, we will continue to apply the principles of economic and efficient management in our day to day decisions. We have the attention of the Defense Department leadership, gained through the widespread participation of these individuals in the reform effort, and we have placed major emphasis on continuing the implementation of our programs. As we proceed, I ask for your continued interest and backing.

FRAUD AND WASTE

I would like to turn now to our efforts to eliminate fraud, waste and abuse. Oversight in this area has been vested in the assistant to the Secretary of Defense for Review and Oversight, a new position established only last spring by this administration. Since that time, we have pulled together a multifaceted campaign to focus the efforts of thousands of auditors, inspectors and investigators on the war against fraud, waste and mismanagement. This campaign includes strengthening the role of DOD and the General Accounting Office auditors in their assessment of Defense programs by ensuring that all audit recommendations are carefully considered.

We have begun to see encouraging results. Perhaps most promising is the establishment of a formal audit resolution and follow up system to insure that audit recommendations are more carefully considered. Two DOD Directives issued in 1981 fundamentally alter the relationship between auditors and management. Under these new operating procedures, auditors and managers are required to resolve their differences on each and every significant audit recommendation and, where appropriate, establish firm timetables to implement corrective action. We will not tolerate a situation in which audit recommendations pile up on the shelf with little effort made to implement the suggested management improvements.

The most recent semiannual report to Congress on audit, inspection and investigation operations in the Department of Defense describes the many efforts underway to root out fraud and crack down on waste. A few statistics from that semiannual report convey the magnitude of this task. During the period from April 1-September 30, 1980, DOD's internal auditors issued 1,675 reports on a wide variety of programs. These reports contained recommendations that could save about \$1.2 billion.

In addition, the Defense Contract Audit Agency, which examines billions of dollars worth of existing or proposed contracts, issued about 33,600 reports which questioned or set aside as unresolved or unsupported about \$12 billion in costs. During

the same 6 months, contracting officers disallowed some \$3.5 billion in proposed contractor costs, based in part on DCAA audits from the 6-month and earlier periods. By establishing audit resolution and follow up systems for defense contract audits similar to those established for audits of management practices, we have tightened our control over contract costs. Contracting officials are being encouraged to pay closer attention to the auditors' money-saving recommendations.

As I mentioned, the Defense Department is concerned with criminal fraud as well as management inefficiencies. Our war on illegal activities has taken several forms:

Issuance of a memorandum last June encouraging all DOD employees to report instances of potential fraud or abuse to the DOD Hotline. I am pleased to report that, through promotional efforts by management, the Hotline received more than 1,000 calls during the last 9 months of 1981, more than had been received previously since the Hotline's creation in 1979. We are now preparing a DOD Directive which will further clarify the authority and responsibility of various investigative, inspection and audit activities to Hotline allegations and make the Hotline an even more effective investigative tool in the future.

Establishment of the new Defense Criminal Investigative Service. We are now completing our recruiting efforts to build a staff of about 100 investigative agents who will concentrate on "white collar" crime within DOD.

Guidance to the Department's criminal investigators to give top priority attention to fraud and "white collar" crime. These investigators are receiving special training to perform fraud investigations.

Meeting with Department of Justice (DOJ) officials to encourage prosecution of a larger number of DOD fraud cases. The Justice Department was receptive to our concerns and we anticipate an increase in the number of alleged criminals brought to trial in the future.

Our efforts to blend the skills of the auditors, inspectors, and investigators into a coherent attack on fraud and poor management continue. We expect fewer and fewer instances of unanswered or ignored audit recommendations, and a reduced level of fraud against the Department.

INTERNAL OPERATIONS

In seeking economies, we have looked also at the internal operation of the Defense Department and have made substantial progress in a number of areas. Let me cite a few examples:

Curtailment of travel below levels previously programmed has yielded hard savings and cost avoidances of well over \$500 million over the fiscal years 1981-87 program period. (Simply stated, a hard savings results from reducing a program below our own or the previous administration's budget; avoidance is executing other programs for less than they would have cost under previous policy.)

Use of consultant services and contracted management studies has been reduced by \$1.4 billion over the fiscal year 1981-87 program period. This area will continue to receive close scrutiny for unnecessary expenditures.

Reductions of over \$200 million have been imposed on the purchase of equipment and on audiovisual activities.

Increased productivity and efficiency measures including better utilization of computer and ADP capabilities and changes in advertising and recruitment methods will result in a savings of more than \$500 million from fiscal year 1981 to fiscal year 1987.

In addition, we have made some significant savings in the manpower area. The demand for civilian manpower has been controlled through two parallel initiatives: Cost-effectiveness contracting out and productivity enhancement. We have converted 6,000 Federal jobs to contract, with projected savings of about \$36 million annually. A productivity investment program has been fielded for fiscal year 1983 that should yield twice the savings per dollar invested when compared to our previous years' investments.

This administration has made additional savings in the area of personnel compensation—\$2.1 billion in fiscal year 1982 and a projected \$4 billion in fiscal year 1983—through a cap of 5 percent on civil service pay increases in lieu of the unrestrained application of comparability surveys, once a year cost-of-living increases instead of semiannual increases, and reversal of military pay retirement system reforms proposed by the previous administration that would have cost more in the near term in order to realize some economies in the long term.

Let me summarize at this point the savings I have been discussing:

In acquisition reforms, we are projecting fiscal year 1983 savings of \$2.4 billion and savings over the period fiscal years 1981-87 of \$13.8 billion.

Costs of internal operations have been reduced by \$1 billion for fiscal year 1983 and \$6.9 billion for the fiscal years 1981-87 period.

Savings in the area of compensation total \$4 billion for fiscal year 1983 and we project a savings of \$30.8 billion for fiscal years 1981-87.

These savings total \$7.4 billion for fiscal year 1983 and \$51.5 billion for the entire period under discussion. I believe these figures demonstrate clearly our singleness of purpose in the area of efficient management.

I think it is also important to recognize that we are making savings of this magnitude under very difficult circumstances. By that, I mean we are at the same time confronted by the pressing need to provide the \$38.9 billion I mentioned earlier to accommodate more realistic expectations of increases in the prices of the things we buy. We have done this to make our estimates of future costs more accurate, even though we have had to eliminate some programs to free up the necessary resources.

OTHER MAJOR MANAGEMENT ACTIONS

Before concluding, I want to discuss briefly some actions we have taken in other management areas over the past 6 months. We expect these actions to have a fundamental effect on DOD effectiveness and efficiency.

In September 1981, we established the Defense Council on Integrity and Management Improvements, which I chair. The high priority we place on its work is reflected in its membership: The Under Secretaries of the Army, Navy, and Air force; the Under Secretary of Defense for Policy; the Under Secretary of Defense for Research and Engineering; the Assistant Secretary of Defense for Manpower, Reserve Affairs, and Logistics; the Assistant to the Secretary of Defense for Review and Oversight, and the Executive Secretary. In addition, the Department's General Counsel and the Assistant Secretaries of Defense (Comptroller, Legislative Affairs, and Public Affairs) serve as advisors to the Council.

The Council has three primary missions:

- To identify and pursue management improvements in DOD;

- To stimulate and act as a forum for innovative management ideas; and

- To assure follow up of the results of audit, inspection, and investigation activities.

I consider the Council to be one of our most effective vehicles for generating and sharing new ideas to improve our management, and for insuring that decisions made by top management are implemented throughout the Department. In effect, the Council serves as the conduit through which we can disseminate cost-cutting recommendations to every echelon of the Department.

In its first phase of existence, the Council has addressed topics such as the economies and efficiencies programs initiated by each military department; the status of the 32-point weapons acquisition improvement program; management initiatives undertaken by the Defense agencies; and improvement of our automated information systems. The Council is now entering a second, more aggressive phase in which it will tackle individual management topics and develop workable solutions to vexing problems. For example, the Council will be reviewing: (1) DOD's contracting for commercial industrial activities, (2) interservice consolidation of base support activities, (3) improvement of travel procedures and practices, (4) improvement of inventory control programs, and (5) property control and disposal practices. These are just a few of the many areas in which there are opportunities for management efficiencies.

Since last June, Secretary Weinberger and I have held weekly Secretarial Program Performance Reviews. These sessions allow us to examine major DOD programs in detail, to become aware of problems in time to act, and to provide immediate guidance to the responsible officials. In 1982 we are expanding the Performance Reviews to look at specific weapons programs as well as other on-going programs. In addition, we are closely reviewing two critical programs, the MX ballistic missile and the B-1 bomber, on a continuing bi-weekly basis.

Just last month, Secretary Weinberger and I established a small Office of Management Policy whose Director will report directly to me. This office will help us concentrate on overall Defense Department management policy and monitor progress on our major management initiatives. It will also be responsible for helping the Secretary and me promote the policies and principles of our management initiatives throughout the defense establishment and defense industry.

In conclusion, Secretary Weinberger and I are determined to take any action necessary to enhance the management of the Defense Department because we are convinced that this is required if we are to earn the trust and confidence of the American taxpayer. The taxpayers will bear the cost of a sound defense establishment be-

cause they realize as well as we the need for it. But those taxpayers rightly insist that their money be wisely and well spent, and that increases in defense funds be translated into more and better equipment, at lower unit cost, fielded sooner.

The various Services and organizational units in DOD have fully supported all these initiatives and are moving ahead with us. We ask Congress, also, for your full support and recognition of our efforts to manage the most important program in America today—the management, no less, of the means of our survival as a nation.

Chairman TOWER. Thank you, Mr. Secretary.

Would you like us to proceed directly to questions? Do you want to make presentations other than the one that you have just made?

Mr. CARLUCCI. We will go directly to questions, if that is your choosing, Mr. Chairman.

FIVE-YEAR PLAN

Chairman TOWER. Mr. Secretary, how stable is the 5-year plan and why should it be viewed as more stable than previous such plans?

Mr. CARLUCCI. Of course, Mr. Chairman, it will only be stable if we get the full support of the Congress. The reason that it will be more stable is because it is a comprehensive 5-year program which lays before the Congress the true costs of weapons systems.

As I indicated, we have put great effort in budgeting to most likely costs. We have increased our estimates for inflation in the outyears. We have included in our costing such things as testing and readiness which have not been included in prior years. We have moved to strengthen the industrial base and we have tried to build stability in our programs through such devices as multiyear contracting and full funding.

So the answer to your question is we have laid out before you what we consider to be a very honest budget, one that will tell you right at the outset what the true costs are. There are no hidden costs here. You can make the choices. If you elect to accept our budget we think we can attract additional investment into the industrial base, we can encourage our contractors to buy in more economical units, and overall we can achieve substantial savings.

Chairman TOWER. Secretary Weinberger noted in his testimony last Tuesday that a full 93 cents of every defense dollar is tied to fixed costs or prior year obligations. Could you provide more detail on this statement and does it apply to the budget that is now before us?

Mr. CARLUCCI. Yes, sir, Mr. Chairman, that detail is in some of the figures that I read to you toward the end of my comments; 31 percent is TOA from prior years. That is \$67.8 billion in this budget. I am talking about outlays; 62 percent is O. & M., \$133 billion. The 7 percent is that 7 cents he mentioned and that equates to \$15.7 billion.

Chairman TOWER. What factors suggest the desirability of higher procurement rates for certain systems but not necessarily multi-year procurement? Do you remain constrained by lack of funding in any of the programs listed for more economic production rates?

Mr. CARLUCCI. In the programs we have listed, no. We have budgeted fully for the quantities that we have laid before the Congress and thereby achieve economic production rates. This does not mean that we didn't have to make some hard choices between programs.

There were other programs where we would have liked to increase the rates, but due to overall budget constraints we were not able to.

Those programs that we selected were programs that we regarded as stable programs and where we would achieve the greatest savings by putting in additional money for greater up-front buys. We did two things. We either compressed the buy by moving money up front so that we bought the same amount of equipment but bought it earlier, or we put additional money in so that we would get new equipment. But the savings have been calculated on the old base, that is what we would have bought before we added additional equipment.

In a word, we took the new unit cost as a result of the greater buy and multiplied that by the original buy to bring about the savings figures which we have presented to you.

Chairman TOWER. Thank you, Mr. Secretary.

Senator Stennis?

Senator STENNIS. Mr. Secretary, I am impressed with your statement and I know it represents a lot of capable work that always comes from you. I am impressed by what you said about your planned vigilance and oversight and following up on these dollars to see that they get a dollar's worth in value.

BUYING DETERRENCE

I have adjusted my thinking as the years have come and gone that we are spending a lot of this money for deterrence. We are buying deterrence. That is, frankly, about the only way I can justify all of it. I don't think we get very far by going back and comparing and trying to judge the past but try to see what we are in now. I think it is a legitimate expenditure to just buy deterrence and a great deal of it goes for that purpose as a background or foundation for some kind of effective arms limitation or whatever else.

But I think if we just come out and say now we are going to pass a reasonable and fair Selective Service Act where by some numbers, the necessary numbers are going to be required in 15 or 18 months in the Guard, in the Reserve, any Reserve, or Regular units with some reasonable obligation for the future years as members of those units, I believe that is the shot that would be heard around the world of this tremendous Nation that can afford a budget like this.

MANPOWER

We are skipping the most important part, as I see it, of the whole military setup; which is the manpower. Now I say that with the greatest deference to many, many highly qualified and credible people who are wearing the American military uniform which is always an honor as I see it.

I opposed the repeal of the Selective Service Act. I am not claiming any particular credit, but it shows a consistent thinking. I have tried to support and have supported our present military plan. It has been improved some and I am not trying to weigh anyone's fault. But I am talking about the electric impact that would go around the world as a real deterrent in this whole concept of arms

races. I believe it would be the basis, and perhaps the only basis, for us getting real meaningful arms limitation agreements satisfactory to us. I know you can't turn aside all of a sudden here and go to advocating that without the most intense preparation. I would hope that you would have some inclination. I say no President can get up just before breakfast and proclaim this and advocate it. I don't expect the present President to in that way, but I say some President must advocate it, as I see it, and tell the American people that he thinks it is necessary.

Do you have any thoughts along that line that you would be willing to disclose now?

Mr. CARLUCCI. Let me make two comments, Senator Stennis.

INCENTIVE FOR ARMS REDUCTION

One, we agree with you, that what we are buying in this budget is deterrence and hopefully an incentive for the Soviets to come to the table and discuss meaningful arms reductions. But we have to weigh deterrence in the light of the very substantial increase in the Soviet military machine. As you know, they have been growing, their military has been growing at a rate of 4 to 5 percent in real terms while our military establishment was eroding in the seventies and they are now putting 14 percent of their gross national product into the military.

As far as people are concerned, we have placed great emphasis on people in this budget. We are funding the 11.7-percent-military-pay increase the Congress voted about a year ago, and then the average 14.3-percent increase on top of that.

We are very encouraged by what we are seeing as a result of these pay increases and as a result of the increased stature and respectability attached to wearing the military uniform.

ALL-VOLUNTEER FORCE

All our services are now meeting or exceeding their recruitment goals and quality is going up for the Army. The percentage of high school graduates coming in has gone up from 68 percent to 80 percent in fiscal year 1980 and 81 percent in fiscal year 1981. So we are quite encouraged at the prospects for the All-Volunteer Force.

The final point I would make is that this budget does not have major force expansion in it. The total increase in military personnel for 1983 is 37,200. We have placed emphasis on readiness and sustainability first and then a modest modernization program. So there is not a great deal of force structure expansion. All of the indications are right now that we will be able to meet our needs through the All-Volunteer Force.

Senator STENNIS. Mr. Chairman, I have additional questions here and I ask unanimous consent they be included in the record. If that is granted, that is all.

Chairman TOWER. They will be included in the record.

Senator STENNIS. I thank the chairman. That is all I have now.

Chairman TOWER. Senator Goldwater has agreed to let Senator Warner go next.

Senator Warner?

Senator WARNER. Thank you very much.

NATION'S ECONOMY

Let's talk about national priorities. There is a growing belief that we cannot build any stronger national defense than the very foundation upon which it rests, namely, our Nation's economy.

There is a further growing belief, and I think this will be the debate in the Congress, that the threat from increased loss of jobs and continuing high interest and inflation outweighs any threat posed by the Soviets or any other adversary to this country and certainly in the coming year.

My question to you is in terms of priorities I judge from the increased defense spending as opposed to a level-funded budget for 1 more year, that it is the consensus in the Department of Defense that indeed the threat from the Soviet Union and possibly another adversary is indeed greater than these uncertainties facing us with respect to our national economy.

Mr. CARLUCCI. Senator Warner, I think to answer that question you would have to look at momentum. The Soviets have been investing in their military establishment over a longer period of time while we were disinvesting in ours. The result is that they have enormous accumulated assets. It would take real increases on the order of 14 percent a year for us to equal their accumulated assets by 1990. Such is not our purpose.

TECHNOLOGICAL AND STRATEGIC ADVANTAGES

We believe we have a technological advantage and we have certain strategic advantages, but we are clearly lagging behind their enormous momentum. In the strategic area there is a danger that unless we move rapidly there would be a window of vulnerability.

The Soviet Union shows no signs of slacking off. Over the past 5 years the Soviet military programs measured by their dollar size have been 50 percent larger than ours; in the critical area of military investment, the Soviet effort has exceeded ours by 80 to 90 percent. That is to say, if you took what they are getting and measured it in dollar terms you would find that we would have to spend some 80 percent more to equal them.

I think they made their intent abundantly clear. They say that their military machine is to help them in pursuit of their political goals. All we have to do is look at events in Afghanistan or look at the menacing actions around Poland or look at what has happened in Ethiopia or at the sophisticated use of surrogates to understand that.

Secretary Weinberger has said that defense must be viewed as the ultimate social program because unless we are able to protect our social programs they aren't very valuable.

I for one cannot believe that this Nation cannot afford an adequate defense. What we are proposing in this defense budget is to increase the share of defense from some 6 percent of the gross national product to slightly over 7 percent. Compare that with the 8 or 9 percent of the gross national product that we spent on defense in the fifties or sixties. Sure, it requires some sacrifices, but I for one believe the Nation can afford it.

SOVIET THREAT

Senator WARNER. I understand your statistics very clearly, but we have a new President with a new program and he is trying to make a dramatic turnaround in the direction of this country. Again, I get from your responses that you feel this threat of the Soviet momentum outweighs any threat in terms of inflation and interest and joblessness just for the period of the coming year?

Mr. CARLUCCI. Well, we believe that the President's program can provide an adequate base for the kind of defense reconstitution that we have recommended. I do not view the President's program as any kind of a threat to the economy. We view it as one that will help to restore the economic growth of this country and provide a basis for funding the defense budget we have laid before you.

MARITIME SUPREMACY

Senator WARNER. I turn to the question of a new term that is growing up, and that is maritime supremacy. Is that indeed the policy that the Department of Defense is striving to achieve and, if so, what is the definition of maritime supremacy?

Mr. CARLUCCI. I think there has been some confusion on that term, Senator Warner. First of all, let me clarify that when we use that term we are talking only about maritime superiority and not overall supremacy. We do not seek overall supremacy.

As is well known, this Nation is heavily dependent on imports for its strategic materials. It is not an exaggeration to say that we are an island nation. In any kind of a conflict we have to protect the sea lines of communication. At the same time, we have to have an adequate strategic deterrent force at sea.

Furthermore, we have to have the ability to project our power in areas where regional conflicts threatening our vital interests might arise. So when we talk about maritime supremacy we are not talking about absolute control of every nook and cranny of the ocean. What we are talking about are these three areas, our ability to project power where we need to project it, our ability to protect the sea lines of communication and our ability to have an adequate strategic deterrent at sea.

I would further note that the term "maritime" does not refer just to the Navy, but it refers to the Navy and such air support as may be devoted to the missions I have described.

CARRIER TASK FORCE VERSUS CRUISE MISSILES

Senator WARNER. Turning to the means by which you hope to achieve this goal, it is mainly through the augmentation of the carrier task force. Did you balance that off against the possibility of taking the existing ships or newer ships and putting on a heavier concentration of cruise missiles? In other words, let's discuss the dichotomy between one approach in the Navy in terms of the cruise missiles and the other, the carrier task force.

Mr. CARLUCCI. Senator Warner, we don't view those as either/or's. We have a program for modernizing our cruise missile force that will be at sea, by putting them on both surface platforms and on our attack submarines. At the same time, we find that the cur-

rent 12 carriers are inadequate to achieve the missions currently assigned to our naval force. Consequently, we put the additional two carriers in the budget. This will give us the 14-carrier battle groups.

So the essential answer to your question is that we think we have achieved a balance between both the cruise missiles and carrier capability.

Senator WARNER. Thank you, Mr. Secretary.

Chairman TOWER. Senator Cannon?

Senator CANNON. Thank you, Mr. Chairman.

AIRCRAFT PROCUREMENT

Mr. Secretary, the total for aircraft procurement for fiscal year 1983 shows an 80-percent increase over the fiscal year 1981 level. The heart of the aircraft procurement account is the spending for combat aircraft and this portion of the overall account increases 100 percent over the fiscal year 1981 level of \$8.6 billion.

Some of this increase is for the B-1 and for heavy emphasis on the procurement of long-lead items for later procurement. When B-1 procurement and the increase for long-lead items is subtracted the total for combat aircraft for fiscal year 1983 is \$13 billion compared with \$8.6 billion in fiscal year 1981, a 50-percent increase.

The key point is that this 50-percent increase, or \$4.4 billion buys only 24 more combat aircraft than were brought in fiscal year 1981. This is an increase of only 4 percent over the 556 combat aircraft procured in the fiscal year 1981 program.

With this kind of a dollar increase over and above B-1 funding and the increases for long-lead items why are we getting only 24 more combat aircraft for those kinds of dollars?

Mr. CARLUCCI. Senator, I have to track through those figures to be able to answer your question with any degree of detail. You may be using TOA figures. There may be termination liability for the F-16 in those figures and that is a substantial amount of money, \$246 million. The figure may also include funding for spares.

The average age of our Tactical Air Force has been increasing and this budget would start to turn it around and move it in a downward direction, but it would still be less than optimal. I think the average age of the Tactical Air Force in this budget is about 10.8 years whereas the optimal would be somewhere down in the neighborhood of 10 years.

The fact is that our tactical air capability has eroded and this budget is an effort to get it back up, but it is also an effort, as I indicated earlier, to put adequate TOA in so that you can see what the up-front costs are. I would be glad to have my staff go over those figures with you because I suspect there are some up-front costs that would spend out over a longer period of time in those figures that you read.

Senator CANNON. Mr. Secretary, why don't you have your staff go over that and maybe you would like to supply something further for the record.

Mr. CARLUCCI. I would indeed, Senator Cannon.

[The information follows:]

Of the 50 percent increase in fiscal year 1983, 15 percent is caused by inflation, leaving a real growth of 35 percent. Major reasons for this real growth are:

1. The F-16 aircraft procured in fiscal year 1983 are more expensive than those procured in fiscal year 1981 because of the added costs for the Multi-Stage Improvement Program.

2. Although the same number of F-15's are procured in fiscal year 1983 as in fiscal year 1981, the cost per aircraft increases because of conformal fuel tanks and peculiar support equipment for the F-15 aircraft.

3. Three major aircraft programs are new in fiscal year 1983 compared to fiscal year 1981—AV-8B, AH-64, and SH60B. These new aircraft types are more expensive because they are starting their production; savings due to learning will not be enjoyed until later buys.

4. The relatively inexpensive A-10 will be procured at a much lower rate in fiscal year 1983 than in fiscal year 1981 (20 versus 60) changing the mix from low to high cost aircraft and closing the line, incurring close-down costs.

TACTICAL AIR WINGS

Senator CANNON. Now Secretary Weinberger testified that the Air Force is going to increase its tactical wings from 36 wings in fiscal year 1982 to 40 wings by fiscal year 1985. However, purchases of combat aircraft for the Air Force declined from nearly 300 aircraft in fiscal year 1981 to about 200 in fiscal year the 1983 budget. How do you reconcile an increase in force structure with a decrease in procurement for combat aircraft?

[Additional information follows:]

TACTICAL AIRCRAFT PROCUREMENT

In order to preclude significant force obsolescence in the late 1970's, the Air Force underwent a major modernization of its tactical aviation force structure in the 1970's. The elements of that effort were the F-15, F-16, and A-10 programs, all of which reached peak production during the fiscal year 1977-81 time period. Between fiscal year 1977 and fiscal year 1981, the Air Force procured over 1,600 fighter/attack aircraft, some of which are still being delivered. That dedicated modernization effort reduced the average age of the fighter/attack inventory to a healthy 8.3 calendar years by the beginning of fiscal year 1982 and permitted the Air Force to plan an expansion of its force to 40 notional wings by fiscal year 1985. The Carter program was able to sustain the planned growth to 40 wings with their reduced procurement program for the 1980's but at the price of significant force aging and the need for another massive procurement program in the 1990's.

To compare one procurement year to another outside the context of the individual programs or the long-term plans can be misleading. The current fiscal years 1983-87 Air Force program procures nearly 700 more fighter/attack aircraft than the previous administration. These additional aircraft will permit us to hold down aging while sustaining the programed force growth through fiscal year 1985 and beyond.

Mr. CARLUCCI. This is Mr. David Chu of our Office of Program Analysis and Evaluation.

Mr. CHU. The mix of aircraft has changed over this period. In this period you had the end of the A-10 buy, which was a large buy of relatively inexpensive aircraft, and now we are moving toward higher performance aircraft, and therefore you get some of the results you see. But this program does fund that force expansion adequately with a decline in the average age of the Tactical Air Force relative to what had been true under the Carter administration. The figure that Mr. Carlucci cited of 10.8 years average age for the Air Force tactical aircraft inventory compares to something like 12 years that would have been true under the Carter administration.

Senator CANNON. I am not sure that that completely responds to that question. It seems to me that if you are buying less aircraft

and you are going to increase the number of wings that there is only one way you can do it.

Mr. CARLUCCI. The buy is reduced principally because of the phase down of the A-10, from a buy of about 60 in fiscal year 1981 to a buy of 20 this year. So that program where we have a sufficiency is coming down. But we have increased the buy of the F-15 and we are going into production on the F-18 and we have a buy of about 120 for the F-16 on a multiyear basis. That comes down slightly from previous years, but it comes down in order to provide us a stable program for multiyear contracting.

Senator CANNON. I wish you would have your people look at that and also supply something further for the record because it looks to me like if you are going to decrease your total buy and you are increasing your number of wings that you are therefore going to change your wing structure, or I don't know what you are going to do as an alternative.

Mr. CARLUCCI. I think Secretary Weinberger referred to an increase from 36 notional wings to 40 notional wings over the 1983 to 1987 timeframe. So you have to look at it not just in terms of 1983 but over the entire 5-year period.

Mr. BORSTING. In fact, the F-15 buys do increase significantly in the out-years. They go from, I think, 42 in this budget to 96 in fiscal years 1985-87, and the F-18 buy increases, too, in the out-years. We will be supplying some of this major system data to you for the record.

[The information follows:]

INCREASE IN TACTICAL WINGS

Based on our FYDP procurement of F-15, F-16, and A-10 fighters, the Air Force is programed to grow from our present strength of 36 notional tactical fighter wings to 40 by fiscal year 1986. As Mr. Carlucci indicated, the increased procurement of F-15's and F-16's has allowed us to attain this growth. In addition, this procurement provides for the modernization of our strategic air defense forces. The procurement rates we have submitted in the FYDP are shown below:

	Fiscal year—				
	1983	1984	1985	1986	1987
F-15.....	42				
F-16.....	120		[Deleted]		
A-10.....	20		D0		

Senator CANNON. The fiscal year 1983 program for attack fighter and attack aircraft continues the trend set last year where we are now buying about 300 aircraft a year. In previous years we bought about 400 a year or more.

Now with the kinds of increases we have seen in the defense budget overall shouldn't we be buying these tactical aircraft at more efficient rates? This is one of the main points of the thrust of your statement. I think it looks like we are not buying them at the most efficient rate.

Mr. CARLUCCI. We did increase the buy of the F-15 and the F-18. After we had gone through the entire budget cycle I called for a review of stable programs where increased money might result in

economies. I had the F-18 and the F-15 submitted to me and we increased the buy in this area.

Now, once again, you have to look at the entire 5-year timeframe and you have to take into account the phase down of the A-10, but we greatly accelerated the buy of the F-15 and the F-18 and we have put the F-16 on a multiyear basis.

MODERNIZING AIR DEFENSE INTERCEPTOR SQUADRONS

Senator CANNON. I understand the Air Force intends to modernize its air defense interceptor squadrons. Can you outline the scope of the modernization effort and tell us the extent to which this modernization effort will influence the procurement of the F-15 and the F-16?

Mr. CARLUCCI. You are talking about the aggressor squadrons?

Senator CANNON. No, the air interceptor program.

Mr. CARLUCCI. The air interceptor program.

Senator CANNON. Air defense interceptor.

Mr. CARLUCCI. Some of the F-15's that we would be buying through this timeframe would be assigned to the air defense program. Also, we have some AWACS purchases in the budget that would be assigned to the air defense program, but I would have to submit for the record exactly how much of the increased buy would be assigned to air defense.

Mr. CHU. The precise details are classified, but a significant portion of the F-15's will be for that purpose.

Senator CANNON. I can't hear you.

Mr. CARLUCCI. The exact details are classified, but Mr. Chu says that a significant portion of the added F-15's will be for our air defense.

Senator CANNON. Mr. Secretary, what are the investment trends in terms of the share of the budget for procurement and R. & D. for strategic forces, for general purpose forces and mobility forces during the fiscal year 1983 to fiscal year 1987 5-year defense program. If you don't have that readily available, you could supply a chart of that for the record.

Mr. CARLUCCI. I don't have it readily available. Strategic forces account for about 15 percent of the budget. Over the 5-year timeframe readiness and sustainability goes up about 9 percent in real terms over what the Carter base would be, but I don't have calculations of the changes in the respective shares.

I would judge that mobility would probably increase more than any of the other shares. Strategic would go up relative to the past few years, but it is still under the percentage assigned to strategic forces when we were first constructing our strategic forces in the fifties and sixties. But if there is anything that probably occupies a larger share of the budget, it would be mobility forces.

Senator CANNON. Could you perhaps give us a chart for the record that would show the trends in relative shares of the investment accounts compared with those of the previous 5 years, let's say?

Mr. CARLUCCI. Yes, sir, I would be glad to.

[The information follows:]

The following table shows the percentages of the DOD budgets, in TOA, for fiscal years 1978 through 1987 that cover R. & D. and procurement resources for strategic, general purpose, and mobility forces. In the DOD Five Year Defense Program (FYDP) some mobility resources are included in the category, general purpose forces. In preparing this answer, these resources were deleted from the FYDP general purpose forces data and are included under mobility. The Air Force KC-10 procurement program is an example of resources that were shifted to be shown under mobility forces.

PERCENTAGES OF DOD BUDGETS IN TOA BY MAJOR FORCE PROGRAM AND FISCAL YEAR

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
Strategic.....	3.95	2.74	3.54	3.20	3.72	5.68	7.07	6.69	6.54	5.09
General purpose.....	16.55	17.15	16.43	19.18	21.53	23.14	21.72	23.72	24.45	26.43
Mobility.....	.25	.58	.55	.87	1.43	1.47	1.81	1.56	1.44	.91

We are in the process of updating the Five Year Defense Plan (FYDP) in support of the fiscal year 1983 budget and the long-range forecast. We expect to be able to provide a chart to answer your questions about budget trends in major force programs by March 1, 1982.

Senator CANNON. Thank you, Mr. Chairman, my time is up.

Chairman TOWER. Senator Goldwater?

Senator GOLDWATER. Thank you, Mr. Chairman.

Mr. Carlucci, we have heard some rumors that Chrysler may be trying to sell the main battle tank division. Have you heard anything about that?

Mr. CARLUCCI. Yes, sir, I have.

Senator GOLDWATER. Who are they trying to sell it to?

Mr. CARLUCCI. They have been negotiating with several firms. It was put out for bid and their most recent negotiations have been with General Dynamics.

Senator GOLDWATER. What effect is that going to have on the tank's cost?

Mr. CARLUCCI. We have been actively involved in looking at that, Senator Goldwater, and we are assured by both Chrysler and the potential purchaser that this transaction will not result in any increase in cost and we have taken the necessary steps to see that our interests are protected in any transfer that takes place. I would be glad to supply appropriate materials to you on this.

Senator GOLDWATER. Would you keep the committee posted on that proceeding?

Mr. CARLUCCI. Yes, sir.

[The information follows:]

There is no additional information at this time. We will keep the committee advised.

DEFENSE RESOURCES BOARD

Senator GOLDWATER. Mr. Carlucci, in your prepared testimony you talk about the Defense Resources Board and I have a list of the membership. This is something I have been trying to get accomplished for over 20 years, something like this.

I am wondering why you couldn't expand this Board to include outside people other than the men in uniform or the civilians in the Pentagon, bring in some academics and bring in some management type people? I think you have been around there long enough

to admit that one of our great weaknesses is in the whole procurement field.

Have you thought about expanding that Board?

Mr. CARLUCCI. We have given a good deal of thought to the composition of the Board, Senator Goldwater.

One of the problems in expanding it is that you lose the ability for good interchange and discussion generally when you pass the number of 25 or 30.

Another is that the people who sit on the Board must be involved on a daily basis in all of the programs we are discussing.

On the other hand, we are anxious to get outside views. We brought in the CINC's and had each of them make two presentations to the Defense Resources Board, one at the outset of our discussions on the defense guidance strategy session and, second, when we were actually looking at the budget itself.

Second, we have created in the National Defense University the Strategic Concepts Development Center that I referred to in my statement. It is my intent to have the Defense Resources Board draw on the academic talent that we have brought into the Strategic Concepts Development Center. Indeed, they have come to me with a list of projects and I have gone over the projects with them to try to assign to them items that would be of high priority for the Defense Resources Board.

Finally, there is of course the problem that we are constantly discussing classified information in the Defense Resources Board so it would be very hard for us to bring in outsiders who do not have the full range of security clearances.

Senator GOLDWATER. Well, we can't discuss this at proper length here. I would like to visit with you some day on this because I am convinced we can improve the whole procurement process.

Mr. CARLUCCI. I would be pleased to do that.

PURCHASE OF C-5 OVER THE C-17

Senator GOLDWATER. Are you and the Secretary of Defense going to proceed with the purchase of the C-5 over the C-17?

Mr. CARLUCCI. Yes, sir. We have, through fiscal year 1987, funds for the purchase of 50 C-5N's, the new version of the C-5. If I may elaborate on that. You have to look at our airlift program in its totality. It is something in the nature of a \$13 billion program.

You referred earlier to the Defense Resources Board. The constant theme echoed by all of the CINC's was that we need more strategic airlift. We have gone, if I may say so, in a big way for strategic airlift in this budget. The reason that we chose the C-5N over the C-17 is, quite simply, that it can give us more airlift faster. By the end of the 1987 period our program will give us some 12½ million ton-miles per day of new capacity compared to 8.7 million ton-miles for a program containing the C-17's.

We can get 17 more C-5 aircraft in the timeframe that we can get C-17 aircraft and of course they are larger aircraft. By the end of the funded delivery period the C-5N, coupled with the KC-10 purchase that we have in the budget, coupled with the CRAF program will get us about 17 million ton-miles of airlift. This comes close to

meeting the shortfall which we have identified in our report to the Congress of 25 million ton-miles.

Senator GOLDWATER. I am not being critical of your choice. I am all for it. We have been about 20 percent short on M-Day airlift as long as I can remember in the Air Force. I don't think the C-17, although I advocated it strongly, can match the C-5, and I would hope you would go ahead with this in spite of the arguments that you will be presented by Members of Congress.

One more question, Mr. Chairman.

AH-64 HELICOPTER

The other day we had a hearing on the AH-64 helicopter, the Apache, and the Army stated that they would not approve a purchase of this aircraft until reductions had been made or reached in the price which is now roughly \$16 million. Are you in accord with that?

Mr. CARLUCCI. Yes, sir. The new attack helicopter is a very good helicopter. I think we are all agreed on that. But we are equally agreed that the price escalation has been outrageous and we do not intend to go ahead until we have solved the price problems.

Senator GOLDWATER. Well, I hope you will stay on top of that. I have flown the helicopter and it is the best helicopter for military purposes I have ever been in, but \$16 million is a lot of money and next year it will go up a lot more than that. There is always the little old Cobra hanging back there that we can buy more of even though it is not as good a helicopter for these purposes.

I hope you will keep the committee informed as to your actions and interests in this.

Mr. CARLUCCI. Yes, sir, I will.

Senator GOLDWATER. Thank you, Mr. Chairman.

Chairman TOWER. Senator Byrd?

Senator BYRD. Thank you, Mr. Chairman.

Mr. Secretary, I spent the last 2 days going over the President's new budget. I can't say that I have gone into every detail, but I can say that I do support his proposal to reduce domestic spending. I think that is necessary.

I am alarmed, however, by the magnitude of the projected deficits. They will be unprecedented deficits for at least 3 years and probably longer, and that brings me to the defense budget.

Now as I read these figures, and I might say that I have been an advocate of a strong defense for many years which has been recorded by hundreds of votes in both this committee and in the Senate, but as I read this budget your figure of \$216 billion will deal only with outlays. Outlays is almost 40 percent greater than the \$156 billion for 2 years ago; namely, 1981. That is a \$60 billion increase in that 2-year period, 38.5 percent or almost 40 percent in that short period of time.

COMPARING FISCAL YEAR 1981 OUTLAYS WITH FISCAL YEAR 1983

Now my question to you, Mr. Secretary is of this \$60 billion increase, and we are dealing now with the 1983 figures for the budget that you are testifying on today and 1981, and I would like to get these figures. How does the procurement figure for fiscal year 1983

compare with the procurement figure for fiscal year 1981? Now I am speaking of outlays and not of TOA.

Mr. CARLUCCI. The figures I have, Senator Byrd, are in constant dollars \$215.9 billion for fiscal year 1983, \$181.4 billion for fiscal year 1981.

Senator BYRD. Well, aren't you speaking of fiscal year 1982?

Mr. CARLUCCI. For fiscal year 1983 \$215.9 billion.

Senator BYRD. Right.

Mr. CARLUCCI. For fiscal year 1981 \$181.4 billion. This is in constant dollars, constant fiscal year 1983 dollars. But I would have to get you for the record how the procurement accounts compare, unless Dr. Borsting has it here.

Mr. BORSTING. The outlays in fiscal year 1981 in the procurement account were 35.2, and in fiscal year 1983 55.2. That is in current dollars.

Mr. CARLUCCI. So the Delta would be somewhat less in constant dollars.

Senator BYRD. Let me see if my staff has given me the right figure to start with. The outlays for 1981 is \$156 billion?

Mr. CARLUCCI. That is right, sir.

Senator BYRD. \$156 billion.

Mr. CARLUCCI. That is in current dollars, yes, sir. Now if you translate that into constant dollars it comes out to about \$181 billion.

Senator BYRD. Let's keep it in current dollars. Then \$183 billion for 1982 and \$216 billion, and I am rounding it off, for 1983.

Mr. CARLUCCI. That is right.

Senator BYRD. The procurement then got \$35 billion in 1981 and will bet \$55 billion in 1983.

Mr. CARLUCCI. That is right, once again in current dollars.

Senator BYRD. Now what about R. & D. on a comparable basis?

Mr. CARLUCCI. For R. & D., \$15.3 billion goes up to \$22.2 billion.

Senator BYRD. That \$15 billion is for fiscal year 1981.

Mr. CARLUCCI. That is right.

Senator BYRD. And the \$22.2 billion is for fiscal year 1983.

Mr. CARLUCCI. That is right, sir.

Senator BYRD. Now do you have a comparable figure for personnel and personnel-related costs?

Mr. CARLUCCI. Yes, sir. The total military personnel cost goes up from \$36.4 billion to \$44.5 billion.

Senator BYRD. Well, I don't believe that is the total personnel cost, is it?

Mr. CARLUCCI. That is military personnel only. You would have to add to that retired and civilian.

Senator BYRD. I was speaking of the personnel costs for the entire Defense Department.

Mr. CARLUCCI. I don't have that here. We would have to submit that for the record, sir.

[The information follows:]

DEFENSE MANPOWER COSTS

Personnel costs for military, civilian, and retired personnel go from \$72.1 billion in fiscal year 1981 to \$89.3 billion in fiscal year 1983.

Senator BYRD. Now do you have a figure for the personnel wages and salaries and related personnel costs such as bonuses, medical costs, housing, BOQ's and retirement?

Mr. CARLUCCI. We are still in the process of computing that figure and we will get that figure to you as soon as we have it, Senator Byrd.

[The information follows:]

DEFENSE MANPOWER COSTS

Total personnel costs, to include family housing, personnel support costs, and retired pay, are approximately \$100 billion in fiscal year 1983.

Senator BYRD. Thank you.

Thank you, Mr. Chairman.

Chairman TOWER. Senator Humphrey?

Senator HUMPHREY. Thank you, Mr. Chairman.

Mr. Secretary, I am looking at your prepared testimony and I am intrigued by this presumably new approach of taking a more realistic attitude toward inflation, particularly inflation in defense accounts.

INFLATION IN DEFENSE ACCOUNTS

You state that last year inflation accounted for about 70 percent of the cost growth of our major systems and you are adding \$2.2 billion explicitly in the fiscal year 1983 budget to account for inflation.

Can you give us some figures on forecasts for inflation in the defense accounts? Presumably inflation in the defense accounts will be higher than the general rate of inflation in the economy. Do you have some figures on that? On what are you basing these calculations?

Mr. CARLUCCI. We based our calculation on some of the figures developed by the Bureau of Economic Analysis of the Department of Commerce which has carried out an intensive study of the costs of defense contracting. So we have taken actual experience that has been developed in these figures by BEA and applied it in the out-years to our major weapons systems, to the nine procurement accounts, as, say, ships, tracked vehicles, aircraft, and what is the other one?

Mr. BORSTING. Missiles.

Senator HUMPHREY. Do you have some figures for these various weapons systems?

Mr. CARLUCCI. Yes, sir, we do. We have broken each weapons systems down and projected the inflation rate out and we would be glad to provide the figures.

Senator HUMPHREY. You don't have them right now?

Mr. BORSTING. Yes, I have them right now.

Senator HUMPHREY. Will you give us some examples, please.

Mr. BORSTING. Surely. In the commodities that Secretary Carlucci was talking about, the ships, aircraft, tracked vehicles, and missiles, which are the four commodities, the indices that we are using for those commodities in 1982 would be 9.6; in 1983, 8.5; in 1984, 7.3; in 1985, 7.5; in 1986, 6.5; and in 1987, 6.4.

Senator HUMPHREY. Please repeat the figures for 1983 and state how you come up with those figures?

Mr. BORSTING. For 1983 it is 8.5. We basically worked with the Bureau of Economic Analysis and the Department of Commerce who has back data on these four commodities that we mentioned earlier and using the administration's forecast for the economy for 1983. Using that scenario then we forecast the inflation rates for these four commodities.

Senator HUMPHREY. So the 1983 inflation estimate for military accounts is less than that for 1982, based on a generally favorable economic model?

Mr. BORSTING. Yes. Again, inflation has been coming down faster than even the administration forecast it.

Senator HUMPHREY. Mr. Secretary, I have yet to hear any talk of a possible supplemental. Does this more realistic approach to inflation in the military accounts imply that there will not be a supplemental?

Mr. CARLUCCI. Senator Humphrey, on previous occasions we have taken the position that if the actual inflation rate exceeded the GNP deflator estimate that we used previously in the defense budget we would come up with a supplemental.

In 1981 the actual inflation rate did exceed our experience with inflation and we are presenting a supplemental to the Congress of \$2.3 billion with this budget. The supplemental includes items that could be attributed to direct inflation, indirect inflation and has within it as well some high priority items.

With this new method of estimating inflation in the out-years we do not think we will need to use the supplemental approach in the future.

Senator HUMPHREY. Well, I hope that is true.

Mr. Secretary, as you know, a number of Members of Congress, including some of the more prominent Members, have suggested that cuts in the Department of Defense budget of perhaps \$5 to \$10 billion are in order. We all know that when it comes to cuts in the budget of the Department of Defense they generally fall in the area of the operations and maintenance budget because the spend-out there is much more rapid than in other accounts.

What is the O. & M. figure for the fiscal year 1983 budget?

Mr. CARLUCCI. The O. & M. is \$67 billion.

Senator HUMPHREY. If \$10 billion is cut out of defense, the chances are the bulk of that will come out of the O. & M. account?

Mr. CARLUCCI. Yes, sir, and I would find it very discouraging if that were to happen. Indeed, as this committee is aware, our forces have been shortchanged in the readiness and sustainability accounts year after year to the point that the ammunition supplies have reached an almost disgraceful level in some areas. With the 1981 supplemental we began to turn the corner and some of that money is just flowing in, but we have got a long way to go.

This budget would not enable us to get to our goals on readiness and sustainability until the end of the 5-year period. Such has been the erosion that has taken place in prior years in these accounts. So I would hope that the Congress could avoid cuts in these accounts. These accounts were given our highest priority in the budget review process.

Senator HUMPHREY. Well, I agree fully with what you have said. I agree as chairman of the Subcommittee on Preparedness, that we would be badly hurt in our recent efforts to improve our readiness. I think the public is aware of the shortages in ammunition to which you alluded. They have heard of the nightmare of cannibalization in which brand new expensive airplanes sit in hangars and on runways because they lack spare parts. Cutting the O. & M. account is a classic case of being penny wise and pound foolish.

Just how committed is the administration to protecting that O. & M. account, which I note has shrunk, as a percentage of the total DOD budget?

How strong is the administration's commitment to protecting O. & M. and increasing preparedness?

Mr. CARLUCCI. As a proportion, it may have gone down slightly, but overall, as I indicated, in real terms over the 5-year period, it increases some 9 percent compared to the Carter budget.

We are very committed to maintaining our effort in readiness and sustainability. Indeed, this has been the single-most contentious issue in the Defense Resources Board deliberations. These accounts, as you point out, are very vulnerable in the Congress. They are also vulnerable in the executive branch when we are looking for quick outlay savings. But the Secretary and I have taken a very strong position on this issue and we intend to take a similarly strong position during the congressional debates.

Senator HUMPHREY. Well, if push comes to shove and some cut as are made, can we be sure that the bulk of these cuts will not affect the O. & M. account?

Mr. CARLUCCI. We cannot control what the Congress does, of course. But we will argue vigorously against cuts in the O. & M. account.

Let me just cite a couple of things we have done in the readiness and sustainability areas both within the O. & M. and procurement accounts. We have budgeted 39,000 more flying hours for the Air Force; we have gotten Air Force maintenance backlog down to zero; we have substantially reduced maintenance backlogs in the Navy and the Army, and we have expanded our ammunition production base by some 25 percent in the fiscal year 1983 budget. So we are making a major effort and we intend to stick with it.

Senator HUMPHREY. Thank you. My time is up.

Chairman TOWER. Senator Nunn?

Senator NUNN. Thank you, Mr. Chairman.

NUNN AMENDMENT

Mr. Secretary, in your prepared statement, you mentioned the Nunn amendment as it relates to cost overruns in the overall procurement process. You also mentioned your initiatives to incorporate better estimates of future inflation and budgeting which will be directed toward more likely costs.

First, I want to congratulate you on moving in that direction because I think it is enormously important for us to know what the best estimate is of weapon costs before we make a decision to fund those weapons. When I say us, I mean both in the executive branch decisionmaking process and in Congress. So I congratulate you on

that. That is something that I have felt was the very foundation of cost overruns for a long time.

Second, you mentioned that better estimates and so forth were likely to cause the threshold in the Nunn amendment to be breached. How many systems do you expect to breach the 15-percent threshold on cost overruns?

Mr. CARLUCCI. Senator, it is very hard for me to say at this point. As you know, one of the quarrels we had with the Nunn amendment was that the responsibility is put on the program manager and the Service Secretaries, and the Secretary of Defense is only informed at the last minute.

Senator NUNN. You mean the Secretary of Defense can't do anything about that? He can't send a little message downstairs and say to the Secretaries, let me know as soon as you know, fellows? I would find that incredible.

Mr. CARLUCCI. We have done that. We have put out regulations asking them to let us know, but they have the statutory authority. We think it is inappropriate for them to have the statutory authority.

Senator NUNN. But that shouldn't interrupt the immediate flow of information to the Secretary of defense.

Mr. CARLUCCI. No, but it does weaken our control mechanism.

Senator NUNN. If he doesn't have more control of the Service Secretaries than that--

Mr. CARLUCCI. I guess we could always fire somebody down in the building, but that seems to be an extreme measure.

I indicated in my prepared statement that the December 1980 SAR's, which reflected the previous administration's 1982 budget, reported \$47 billion in cost growth for 47 systems. That was an average increase of more than 18 percent. Since your amendment includes inflation, we would have a fair number that would probably breach your amendment thresholds this year. If I had to take a guess, I would say probably in the neighborhood of 30 or so, most of which would be due to inflation or increasing the buy at the end of the cycle or decreasing the buy which would push up unit costs.

Senator NUNN. You make reference in your prepared statement—and you just alluded to it again—you state that “these thresholds are based largely on the previous administration's program plans.” The amendment that was passed into law established the baseline as the March 1981 SAR.

Mr. CARLUCCI. That is right, sir.

Senator NUNN. It is my understanding that that March 1981 SAR was based on the Reagan March budget amendment with your procurement rates and your inflation rates.

Mr. CARLUCCI. Yes.

Senator NUNN. But you had an amendment before that and the SAR is supposed to be based on that amendment.

Mr. CARLUCCI. There were some modifications, but we didn't have an opportunity in a budget amendment to make a complete overhaul of our program such as we have done in this budget.

Senator NUNN. Mr. Secretary, I brought it up specifically in the hearings long before the March amendment came in and before this amendment passed and I asked for the inflation rates. In fact, I had a long dialog with Secretary Weinberger because he came up

one week and said that the inflation rate of the Carter budget was totally unrealistic because it was too low. About 2 weeks later, he came up and said that the inflation rate should be reduced. I asked why and he said because the Reagan economic program is going to change the inflation rate.

So I would find it strange with all of that as a way of background, you are now saying that your own March figures are largely based on the Carter figures. I would find that very perplexing.

Mr. CARLUCCI. I think, Senator Nunn, all of this could be straightened out if the Nunn amendment were in constant terms, if we excluded inflation.

Senator NUNN. We do. The 1981 SAR is based on the inflation expectations—so it is in constant terms.

Mr. CARLUCCI. No, but there is growth over that SAR which is attributed to inflation.

Senator NUNN. Over the rate of inflation anticipated in that SAR which is your rate of inflation.

Mr. CARLUCCI. Well, we couldn't change the inflation assumptions in the 1981 budget amendment, could we?

Mr. BORSTING. No; but we did have inflation—

Senator NUNN. You had your own inflation assumptions in the March SAR, Mr. Secretary. I think somebody better go back and redo or reread your testimony on this point. I mean, I know it is technical, and I know it has been submitted in good faith, but it is just not in accordance with the law or the SAR reports.

Mr. BORSTING. As you know, Senator Nunn, on the SAR's we are talking about the outyears, even beyond 5 years, the total buy of a weapons system. The March SAR's were not adjusted for this administration's program in the outyears.

Senator NUNN. What are you talking about?

Mr. BORSTING. Well, how many F-18's one would buy, how many F-15's and when you would buy them. This has been drastically changed since then.

Senator NUNN. Which was one of the purposes of the amendment. I knew the inflation assumptions were unrealistic and that was one of the things that we wanted to drive and I hope the amendment has been of some assistance in your argument with OMB on that question.

Mr. CARLUCCI. Senator Nunn, we have brought about the kinds of changes you were urging, but the irony is that these very changes will push us through the thresholds more readily than would otherwise have been the case.

Senator NUNN. I agree, and that was apparent. If it has brought about a permanent change in this respect it would have been well worth the effort.

The other thing that is puzzling about your statement is you say, and I will paraphrase it because I don't remember the exact wording, that there is nothing that is going to be in this amendment when you make the reports if the thresholds are crossed and it wouldn't have been in the SAR anyway.

Mr. CARLUCCI. In terms of information that we furnish to the Congress.

Senator NUNN. Well, that is just not accurate, Mr. Secretary. The law, and I am reading from it, requires a statement for the

reasons for such increase in total program acquisition costs, the identities of the military and civilian officers responsible for program management and cost control, the action taken or proposed to be taken to control future cost growth of such systems and any change in the performance scheduling or technical requirements that cause the inflation rate to begin with as well as the identity of the principal contractors. Now all of that is written in the law. That is not in the SAR report.

Mr. CARLUCCI. But traditionally we provided this information in response to congressional requests as a result of this SAR. It is not as if this information had not been provided to the Congress.

Senator NUNN. It wasn't in the SAR.

Mr. CARLUCCI. It is not in the SAR document per se, no. It has traditionally been provided to the Congress.

Senator NUNN. I hope that somebody will go back and look at this testimony because if this is the Department of Defense's understanding of the Nunn amendment, then they simply aren't reading the law because it is an inadequate description, it doesn't say what happened and it doesn't have an adequate baseline.

I would hope that when we get these cost overrun reports, which I certainly would not attribute to this administration alone. It is based on history. It is based on historical background. But I would hope we would have a much better understanding than this statement indicates. If this is a prelude getting us all warmed up for the cost overruns that are coming, then I at least hope it would be accurate in its portrayal of what is required.

Shifting to another subject, Secretary Weinberger said in a speech not too long ago, and I quote him, in developing our national strategy "immediate and continuous access to the best military advice throughout the process is a most important element."

Now, Mr. Secretary, you referred to the Defense Resources Board. There was a January 8 article in the Washington Post that reported:

On January 7th the Defense Resources Board received a report from Under Secretary of Defense DeLauer suggesting that the five-year defense plan could actually cost as much as three-quarters of a trillion dollars or \$750 billion more than the \$1.5 trillion you are currently projecting.

Exactly what was this report?

Mr. CARLUCCI. Well, the Washington Post article was inaccurate. What the report was was the portrayal of the JCS planning process converted into dollars. Now that is the process that says what would you need if you had to fight a number of wars on a number of fronts at the same time? What would be the ideal if you had everything that you wanted?

Somebody took that and translated it into dollars and put it on a chart and we spent all of 30 seconds on it there but we spent a lot of time on it subsequently. But everybody immediately dismissed it. It did not relate to our budget, it did not relate to our mission, it did not relate to our program, and it in no way implies a cost overrun. It simply said if you had everything you wanted.

Senator NUNN. That is not what the Joint Chiefs think that is. Somebody is going through this exercise and saying that it takes so many dollars to implement the strategy. I realize there has been a gap historically between this report, but doesn't that get right to

the question that Secretary Weinberger is talking about, that he wants good military advice. If that military advice comes in the form of a report that you casually dismiss in 30 seconds, then it seems to me we have got a very bad gap between military advice and the strategy of the Nation.

Mr. CARLUCCI. The Joint Chiefs do not intend that particular document to be used in the programing, planning, and budgeting process. It is a benchmark only.

Senator NUNN. That document is worthless then, isn't it?

Mr. CARLUCCI. It is a benchmark only. It describes programs if you wanted to do everything, or if you had to do everything you thought you might some day need to do. So we take a look at that, but then we move quickly to discussing strategy and doctrine and we try and relate strategy and doctrine to programs. From there we decide what weapons systems we need and from there we calculate the costs of those weapons systems. That is how you get the budget.

Senator NUNN. Well, my time is up, but it seems to me that if that report is of that little utility, then whoever is spending the time to put it together should quit wasting that much time.

Could you submit for the record who puts that report together and the number of man-hours that go into it so we can know what it is that is so worthless because it just seems to me that that is an exercise in total futility.

You may be absolutely right, but if you are not right it means we have a huge gap between our strategy, our military strategy and our ability to carry out that strategy.

Mr. CARLUCCI. It is not totally useless to have the JCS estimate what might be needed if they were to carry out a totally comprehensive strategy, but it is not a very valuable document as far as the budget process is concerned is what I am saying.

[The information follows:]

The Joint Strategic Planning Document (JSPD) is prepared annually by the JCS for the National Command Authorities and DOD. Many man-hours are expended in its development (accurate accounting not available). The document represents the JCS view of national military objectives, and the military strategy and ten-year projected force levels required to achieve those objectives. The document is developed at the start of each year's PPBS cycle to (1) influence the rest of the cycle, and (2) serve as a benchmark for assessing the risk inherent in the military objectives, strategy and force structure ultimately adopted during the cycle. The paring-down process from the JSPD-recommended forces to the programmed and budgeted forces is very complicated, involving judgments about the nature of (and potential for) conflict, the viability of the economy, the potential responsiveness of our mobilization base, etc.

Chairman TOWER. I am sorry, Senator NUNN, your time is up.

Senator NUNN. Well, that may get to the very point that is at heart here, that is the gap between strategy and budgets.

Chairman TOWER. Senator Cohen?

Senator COHEN. Thank you, Mr. Chairman.

Mr. Carlucci, this morning's Washington Post contains two interesting stories. On the one hand, it says:

Defense Secretary Caspar Weinberger in his annual report sent to Congress today accuses the Soviet Union of violating treaties on biological weaponry and calls in the strongest terms, for restrictions on western trade, technology and credit that "help preserve the Soviet Union as a totalitarian dictatorship."

Then, by strange coincidence, right beside that there is a story, "East Germany has Key Role In Pentagon's Paperwork."

I was wondering, since we do have a situation where foreign policy and defense policy should not be considered as separate and apart but rather an integration, using our defense policy as part of our foreign policy, how would we reconcile the purchase of East German typewriters as a small matter? The rationale offered by the Defense Department is that it would help the East buy wheat.

Just quoting from the story it says, "... considering the excellent balance of trade in favor of U.S. economy as a result of grain sales."

One of the rationales offered is that we are buying these typewriters because it will help give them some hard currency which in turn they can use to buy grain from our wheat farmers. How do you reconcile that with Secretary Weinberger's statement that what we ought to do is cut back and restrict the sale of technology, resources, credits and so forth?

Mr. CARLUCCI. They are apples and oranges. One is of course the case of East Germany selling equipment to us and the other is a case of technological leakage to the Soviet Union which is a very serious problem.

With regard to the typewriters, the article is correct in some respects and incorrect in others. It is correct in saying that we do need manual typewriters for use in the field. It is also correct in saying that we do buy some from East Germany because there are no U.S. producers that sell within the United States or that bid on GSA solicitations.

I myself, looked into this problem when it first crossed my desk a number of months ago and said I would like to cut off the purchase of typewriters from East Germany. I found that I am obliged to purchase these typewriters by statute. Our lawyers looked into it and said that the U.S. procurement statutes, to use their language, impose no restrictions that can be applied in this case. In other words, it would be illegal for me selectively to disqualify East Germany. Now if the Congress would like to change this statute, I for one would welcome it.

The reference to wheat or whatever it might be was not a reference to a Department of Defense position, I think a couple of years ago the Congress attempted to attach a restriction to the appropriations bill but withdrew the language when Treasury and Commerce pointed out that East Germany buys \$2 billion of U.S. products while exporting only \$150 million to us. So I think that was the rationale for not amending the legislation.

Senator COHEN. I stand corrected. On closer readings, I think the statement is attributed to the Treasury Department. So we have Treasury and Commerce taking a somewhat different position from that of the Defense Department which probably takes a different position than that of the State Department.

Mr. CARLUCCI. Indeed, I asked on the basis of this that our regulations be changed and found that I could not change our regulations.

Senator COHEN. Well, again, as I understand it, the rationale is that under our existing laws and regulations, if you can get a better product at a lower price you are obligated to buy.

Mr. CARLUCCI. That is right, sir.

Senator COHEN. I have been advised that we have rejected an Israeli mortar which, my understanding is, is superior to other types of mortars that the Defense Department currently purchases at a marginally superior price or better price. Yet, the mortar has been rejected time and time again.

If the rationale is that we are looking for better products at lower prices, would you not say that the rejection of the Israel mortar in favor of another manufacturer would be inconsistent with the same laws and regulations which you have just articulated?

Mr. CARLUCCI. I am only vaguely familiar with the particular case that you have mentioned. I think there was some question of whether the mortar was the most appropriate mortar for the services.

Senator COHEN. Everyone that I have talked to has indicated that it is a superior weapons system, but in fact has been rejected. Even though the price is marginally better, it is far better in its performance. Yet, we have rejected it time and time again. If, in fact, that is correct, then what you are saying is that the Defense Department should, in fact, purchase the Israel mortar.

Mr. CARLUCCI. Without getting into the merits of that particular mortar, let me just indicate that we did, up until the recent suspension of the strategic agreement, have in effect a program to work with the Israelis to make them more competitive so that we could purchase more defense equipment from them. So if we were rejecting the mortar it was going entirely contrary to the entire thrust of our overall relationship with Israel.

Senator COHEN. What is the status of that MOU right now?

Mr. CARLUCCI. It is in suspense. It hasn't changed since the administration announced that it was being suspended.

Senator COHEN. There have been no efforts made to put that on track either by the administration or the Israelis?

Mr. CARLUCCI. Not that I am aware of.

RAPID DEPLOYMENT FORCE

Senator COHEN. Secretary Carlucci, you are aware this committee has a significant interest in the so-called Rapid Deployment Force and the creation of a separate unified command structure for the Persian Gulf region, which is now entitled "CINC Southwest Asia." Could you tell us the status of CINC Southwest Asia and the planned geographic boundaries for that command?

Mr. CARLUCCI. The JCS are still working on the geographic boundaries, but the new command is to come into being next January. The question is what kind of responsibilities can it assume. It is quite clear that it will be able to assume overall planning responsibilities for the region. It will have two dedicated divisions, the 82d Airborne and the 101st under its operational command. It will have other divisions dedicated for planning purposes.

It is not clear at this point whether the command can take over the military assistance programs to those countries. That has yet to be worked out and the question of headquarters location, and, as I indicated earlier, regional boundaries has yet to be worked out.

AH-64 HELICOPTER

Senator COHEN. Last week, before the Tactical Warfare Subcommittee of this committee, Under Secretary of the Army James Ambrose testified about the problems that are now besetting the Army's AH-64 helicopter program. Secretary Ambrose, a man from my hometown of Bangor—and, I think, a man with the ability to look at a complex problem—used a few well-chosen words to describe the nature of that problem.

He told the subcommittee that the history of the AH-64 resembles that of other major weapons systems, and I am quoting from his testimony:

It almost seems to be an institutional phenomenon that these projects start with gross underestimates by both government and contractor usually followed by modest growth in estimates during the early development of phases and then experiencing sharp increases toward the end of development and the early production phases.

For as long as I can recall, we have been dealing with this phenomenon and despite some rather well intentioned efforts, costs overruns continue to be the rule. A number of the members of this committee have made recommendations about how we can deal with that, but Mr. Ambrose has recommended that DOD have more production experts, rather than financial experts, on the line to see that the contracts are more realistic and contractors hold to their costs and time estimates.

No. 1, do you think that is feasible? And, do you think we can find enough people to really make a difference, if it is in fact feasible?

Mr. CARLUCCI. I think the Defense Contract Administration Service, if my memory serves me correctly, already has some 17,000 people out in defense plants. The total for all DOD is about 27,000. Is that right?

Mr. SHERICK. Right.

Senator COHEN. You will recall last year, for example, you testified before the committee that, in fact, defense contractors buy into the system and that the Defense Department, by virtue of what Senator Nunn perhaps was talking about, buys into the system by lowering the estimates on inflation.

Mr. CARLUCCI. That is right.

Senator COHEN. How do we deal with that?

Mr. CARLUCCI. Well, I have tried to lay out in the statement that I have presented to this committee a comprehensive program of dealing with that. It includes an intense effort to budget the most likely costs. Indeed, for a number of weapons systems that we reviewed this year we disagreed with the program manager. We said you aren't budgeting for testing, you aren't budgeting for readiness, you aren't budgeting for technological change and we have added money.

In the case of some Army systems, and I think they are listed at the end of my testimony, we have added contingency funds for technological change. In addition, we have developed a new method of calculating inflation in the outyears based on our actual experience as developed by the Bureau of Economic Analysis of the Department of Commerce.

When you add to that the stability that we hope to introduce in our programs through such things as multiyear contracting and the productivity enhancements that we are going to introduce through the additional investment of the \$500 million that we are putting into productivity enhancements and increasing our progress payments, we hope we can bring additional investment into the defense industrial base thereby bring unit costs down.

But the sine qua non for this entire program is confidence, confidence that once we have embarked on a course of rebuilding America's defenses we are not going to falter. We are not going to get into the stop and start syndrome of prior years. That is why uninformed speculation on cuts in the defense budget is so unhealthy because it tends to drive away potential investment and tends to operate against the very initiatives that we have undertaken in this budget.

CUTBACK ON MANPOWER

Senator COHEN. Mr. Chairman, I just have one observation and not a question. With respect to these proposed cuts, I know there are a few people that I have heard on this committee or in the Congress make a recommendation to cut back on manpower in view of the success we have had with rather significant pay increases to sustain the Volunteer Army. I heard Senator Humphrey talk about the nondesirability of cutting O. & M. as a matter of fact, I recall that members of the minority in the Senate made a rather significant point during the debate on the defense budget last year that they wanted major increases in readiness and sustainability.

In fact, what you are saying here is we have to have more competition in procurement to reduce unit costs over the long term for these weapons systems, and that takes more money and not less.

Chairman TOWER. Senator Exon?

Senator EXON. Thank you, Mr. Chairman.

TOTAL MINIMUM BUDGET

Secretary Carlucci, I suspect that with the rather staggering deficits which are presented in the overall budget by the President today; with the hope that the Secretary expressed when he was before this committee last week, with which I am sure you agree, that this is the total minimum budget that we need to meet the Soviet threat, and with the initiatives you have come up with—and I congratulate you on the operation and maintenance budget, more flying hours, more steaming time and more ammunition, which I think is critically necessary—but I suspect that with those deficits there are going to be some reductions made in the defense budget notwithstanding the recommendations that you have made.

Now whether that is good, bad or indifferent, if some reductions are made somewhere along the line, as a guidance to us could you assure us from your point of view that the reductions should not be made in operations and maintenance? If there is a sacrosanct area, is that it as far as you are concerned?

READINESS AND SUSTAINABILITY

Mr. CARLUCCI. Yes. We have attached the highest priority to readiness and sustainability and we would hope that reductions would not be made in this area. We think indeed it is a matter of conscience. It is just unconscionable to put our people out in a dangerous area without the ammunition to sustain themselves for the requisite period in combat or without the spare parts to enable their mission capable rates to be reasonable.

Senator EXON. If you could help me a little bit further in this regard then, and I appreciate the statements you have just made and I think generally that is the feeling of the majority of this committee, but I have heard of proposed budget cuts in defense all the way from \$5 billion all the way up to \$30 billion.

Could you outline for us, if indeed we must make cuts, what programs would you feel would be in line for some reduction? I suspect it would be in procurement.

Mr. CARLUCCI. Sir, the ink is barely dry on the budget and I don't think it would be appropriate for me to come up and say, well, you ought to cut this, that, or the other thing.

Our position is that cuts have taken place. They have taken place throughout the entire budget process. The services wanted a lot more and the Defense Department wanted more than it got. The overall top line of the Defense Department budget over a 5-year period has come down very substantially since last March. I think our military people will testify that there are still unmet needs even with this budget increase.

Moreover, we have identified over the 5-year period some \$51 billion in savings, sir, cuts in some areas if you want to characterize them as that. At least 60 programs have been reduced or terminated. There are base realignments that we can look at. Indeed, there may be additional base closures that we could discuss with the Congress, although the complexities that the Congress has introduced into the base closure business make it very difficult to get savings from base closures in the near term.

We think we have provided you with the minimal budget needed, in the words of Senator Stennis, to provide an adequate deterrence in the face of the very substantial and growing might of a potential adversary, the Soviet Union.

Senator EXON. Mr. Secretary, did I understand you to say that if cuts are made in the defense budget that the first priority would be base closings?

Mr. CARLUCCI. No; I am saying that that is an area that might be worthy of further exploration.

Senator EXON. Is that not a political threat that is customarily used in the Congress?

SAVINGS THROUGH BASE CLOSINGS

Mr. CARLUCCI. No, sir. We have identified, and I would be prepared to discuss these with you, in addition to the \$51 billion in savings that we have laid out in this budget, some \$200 million savings that we think could be achieved through base closings.

Now, as a result of statutory procedures, we cannot announce these base closings in the budget, but we would be prepared to

come up and review them in private with you. We think there are additional economies that can be brought about in closing bases.

Senator EXON. You aren't thinking about closing down the SAC Air Force Base in Omaha, Nebr., are you? [Laughter.]

Mr. CARLUCCI. No, sir. I don't think that is on the list.

Senator EXON. Well, then I can pursue that line of thought without fear of reprisals, can't I?

Mr. CARLUCCI. Yes, sir.

Senator EXON. I don't mean to be pressing you on this except that there are some very hard decisions that are going to have to be made. You have made your decisions and recommendations to us. Let me pose this question a little differently.

If, for example, we felt it was necessary, because of the collective judgment and wisdom of ourselves and our colleagues, that we had to reduce some of the procurement—and let's say that we looked at the MX program, the B-1B program, and the Trident program—would you care to indicate, if we had to cut, which one of those programs should be cut, or should one be eliminated in the interests of the overall strategy of our Government and our national defense?

Mr. CARLUCCI. Senator Exon, we think they are all essential to the accomplishment of our mission which is why we put them in the budget.

Let me only make the following point, that if you cut the B-1B, you would be cutting \$4.8 billion in TOA and you would get only a \$1.6 billion reduction in outlays in 1983. If you cut the MX, you would be cutting \$4.5 billion in TOA and getting only a \$2.8 billion reduction in outlays in 1983. If you cut the Trident, you would be cutting \$2.5 billion in TOA and get only a \$200 million reduction in outlays in 1983.

The point is that the procurement money spends out very slowly, particularly in ship building. So those who are talking about massive cuts or large cuts in outlays are going to have to be talking about massive cuts in programs.

Before you came in I indicated that if you canceled the B-1B, the MX, the cruise missile program, the two nuclear carriers, and the Trident missile you would get only a \$5 billion reduction in outlays in 1983.

Senator EXON. In 1983?

Mr. CARLUCCI. Yes, sir.

Senator EXON. Roughly what would that be in 1984 because we are looking at outyears also?

Mr. CARLUCCI. I would probably save you \$7 to \$8 billion in outlays.

Senator EXON. \$7 to \$8 billion in all three of those programs; is that right?

Mr. CARLUCCI. I believe I mentioned five. Our money on the average spends out over a 4- to an 8-year period. On the average for every dollar in outlay you have to cut \$4 in TOA.

Senator EXON. My overall concern, and I hope you understand the thrust of my questioning here, but when the cuts come they are going to be very, very difficult to make. I can only feel that some cuts are going to be made, rather substantial amounts, and I suspect that you are going to have more like those which I just asked you. I really believe that if we find it necessary to make cuts we

had better go back to you, the experts, and have you advise us. If we have to imperil some of these programs, which would be the best programs to curtail as we look forward to that threat of the Soviet Union?

WINDOW OF VULNERABILITY

You have heard, I am sure—changing the subject—you have heard before the term “window of vulnerability.” That brings me to the Titan missile program of the administration.

Is there a saving in the fiscal year 1983 budget for the elimination of Titan missiles which has been announced to begin October 1 of this year?

Mr. CARLUCCI. We have announced that we will deactivate the Titan missiles. There will be a formal press release on this tomorrow, which will include the designation of the first Titan wing to be deactivated. We will provide the schedule at that time and I would be glad to get that information up to you.

We do intend to have proper notification to the congressional delegations. However, over the 5-year period we save some \$450-\$500 million in costs through the Titan deactivation. I don't know off the top of my head what the actual figure is in 1983, but I think it's in the neighborhood of \$75 to \$80 million.

Chairman TOWER. Senator Exon, your time is up.

Senator EXON. Thank you.

Chairman TOWER. Senator Quayle?

Senator QUAYLE. Thank you, Mr. Chairman. Mr. Secretary, first I want to congratulate the Secretary of Defense and yourself for the really substantive improvements you have made in policy implementation and management. You are to be commended for these improvements.

I would now like to follow the line of questioning by Senator Exon for a moment, just to impress upon you that this is not in any way an issue confined to the that side of the aisle. I am also concerned about deficits and the magnitude of the defense spending. I don't think there is any doubt, Mr. Secretary, that this Congress is going to go forward with a crucial examination of defense spending.

In fact, the defense increases for 1983 and also the outyears of 1984 and 1985 are going to have to be adjusted. I do believe that it is imperative for you and the Secretary of Defense to come forward with possible areas where we can reduce the budget without doing any significant harm to national security or the strategy that you have developed. I would like to see you come forward and admit that we cannot hope to secure approval for the expected increases of \$35 billion, and the basic doubling of the authority from \$178 in fiscal year 1981 to \$330 in fiscal year 1985.

The way we are going, we are going to have about 535 individual defense plans floating around here, and I believe that would be a very dangerous policy for this administration and for the people of Defense to embark upon. Rather, I would suggest—once again—that you outline for us those areas, besides SAC in Senator Exon's home State, where we can reduce the Defense increase from, say, 7 percent to 5 percent or 4 percent?

What areas should we be concentrating on? Let's zero in on this problem now. The debate has started. The budget has been submitted. Outside the Armed Services Committee there is just not that much support for it, and, I'll be brutally frank with you, sir. Where are we going to go? Where do we go from here?

Mr. CARLUCCI. Senator Quayle, your question carries with it the implication that we put into this budget items that we don't think are absolutely essential. Such is not the case.

We went over this budget very carefully. OMB went over it carefully. The President reviewed it carefully. A number of things were eliminated from it. As I indicated, the top line went down.

We have put in the budget some \$51 billion of savings which are going to be hard in themselves to achieve and will require full support.

Senator QUAYLE. Well, there is \$51 billion in savings, but you say you are going to almost double the authority between 1981 and 1985. The same is also true on outlays. These are significant increases and I applaud you for the management decisions you've taken and the potential savings that you are going to make in multi-year procurement, and so forth.

I don't believe anybody wants to see a weakened national defense. But I was just trying to get to the hard core reality, Mr. Secretary, and that is that we are simply, with this high deficit that we have, not going to be able to accommodate the suggested increases in national defense.

Let me just ask you this question: Do you believe that the deficit of \$98 billion in 1982 and a projected deficit of \$91 billion in 1983 is a detriment to economic growth?

Mr. CARLUCCI. I would think nobody likes that size deficit and obviously it entails problems, but we are looking at the Defense Department budget over a 5-year timeframe. This committee is as aware as I am of the erosion that has taken place in our defense capability over the past 10 years.

You are as aware as I am of the nature of the threat, the massive buildup of the Soviet military machine. You are as aware as I am of the need to support a vigorous foreign policy. And I, for one, cannot believe that our country cannot afford a national defense that is adequate to its needs. The budget we put together is designed to carry out the missions assigned to us.

Senator QUAYLE. Do you believe that a weak economy leads to a weaker or stronger national defense?

Mr. CARLUCCI. I believe that a strong economy is necessary to support an adequate defense budget, but I think an adequate defense budget is absolutely essential if our economy is going to survive. The two are mutually reinforcing.

Senator QUAYLE. The two are. To get a strong economy, Mr. Secretary, we are going to have to get the deficit down, and to get the deficit down defense is simply not going to be able to realize its suggested increase of 15 percent or 7½ percent in real terms. That is the real point, that we have a weak economy. It will tend to get weaker in the next 2 months, and the deficits will probably go up. Then something is going to have to give, and what is going to give is across-the-board restraint in Government spending.

I am told that by 1983 over 90 percent of the new revenues—I repeat of the new revenues—will go to national defense. These figures are disturbing. They are disturbing to me, one who supports a strong national defense and one that has been very supportive of this Secretary of Defense and this President. I will continue to support your efforts, but I just hope that you will come forth as soon as you possibly can, when you appreciate that what I am saying in fact is a reality, to focus upon the deficits. And the deficit means that we're going to have to limit our expectations in defense.

MILITARY INCREASES OF OUR ALLIES

I would like to ask about the military increases of some of our allies. Japan's increase in defense spending as projected for next year is going to be about 3 percent.

Mr. CARLUCCI. Seven and one-half percent nominal increase.

Senator QUAYLE. In real terms 2 percent?

Mr. CARLUCCI. They make their calculations different than ours, and I am not sure what that would come out to.

Senator QUAYLE. It's still less than 1 percent of GNP, but I'm trying to get an actual percentage.

What about Germany?

Mr. CARLUCCI. Let me make one further point about Japan. Their defense budget is the only part of their overall budget that goes up. The rest of their programs—

Senator QUAYLE. Likewise here, only our budget is going to go up 15 percent and theirs is going to go up 7 percent—15 percent in nominal terms.

Mr. CARLUCCI. OK.

Senator QUAYLE. Theirs is 7 percent in nominal terms, 2 percent in real terms. Ours is 7 percent in real terms. What about Germany—its increase in defense spending?

Mr. CARLUCCI. They are still in the process of going through their budget. I would have to correct this for the record, but I think it would be something less.

Senator QUAYLE. Less than 3 percent?

Mr. CARLUCCI. Yes.

Senator QUAYLE. In nominal terms. In real terms probably less than that—maybe not even any growth in real terms.

Mr. CARLUCCI. If there is a growth it would be projected at around 1.1 percent.

Senator QUAYLE. Well, Mr. Secretary, you, and particularly Secretary Weinberger, are to be commended on what you have tried to do with our allies.

But again, just to put this thing in perspective, on one hand we are asking the American people to shoulder the defense burden almost by themselves or virtually by themselves. In any kind of fair ratio of defense spending and percentage of budget or in terms of the gross national product, we find our own economy in a downturn. We've got high unemployment. The housing industry, the farm industry, the small business people are hurting, yet again we're going to come forth and suggest these increases without any reciprocal increase by our allies.

The only thing I can say to you—and you know it because we've talked privately and we've talked publicly and I, again, don't mean this as any criticism—that there is a developing protectionist attitude in this country. I want you to notice that my constituents are concerned about the lack of commitment by our allies in the area of defense spending. And when they can see this disproportional representation on defense spending, in relation to the budget or the GNP, it is disturbing not only to me but to our people.

It is a political fact of life and something that we've got to deal with.

Mr. CARLUCCI. Let me say, first of all, Senator, we agree and, indeed, hope that our allies will do more. At the same time I think we have to take into account their psychology because while our defense budget was going down in real terms at a rate of .2 percent a year throughout the 1970's, their defense budgets were going up at a rate of about 2 percent a year, to the point where they now cover about 45 percent of the NATO burden.

Yes, the situation is turning around. It is very different. The question is how do we get our allies to do more, whether we can achieve it by berating them publicly or whether we can do better by quiet diplomacy urging and setting the example.

Secretary Weinberger and I believe that the latter course is going to be more productive and we have reason to believe that some of their budgets would have been even lower had we not followed that latter course.

COST OVERRUNS

Senator QUAYLE. I want to echo and reinforce what Senator Cohen and Senator Nunn talked about on cost overruns. Senator Cohen spoke about the AH-64 and I want to go on record supporting what both he and Senator Nunn said. I have a particular concern about some of the apparent—apparent at least from a quick examination of this budget—change in attitude by some of the services. There were some initial reports that there was going to be no funding for the P-3C. And now I find in the budget that there are going to be at least six P-3C's.

There was also some discussion prior to the budget that we had enough of the A-10's, and now we are going to perhaps buy more for the National Guard. And also you can go on with the C-5A where we were told that we were not going to purchase any of those, and now they too are in the budget.

How does it happen that all of these reports come out about not putting them in the budget and all of a sudden, when a budget gets around to being implemented, there they are?

Mr. CARLUCCI. Senator, there are a whole series of unfortunate leaks throughout this budget process and no decision is final until the President puts his signature on the budget. And I don't think it behooves us to come up here and measure our budget against some leak that may have occurred 4 or 5 months ago.

You mentioned two programs. Let me just comment on them. There were two determining factors in the P-3 sale. The Navy said for the moment they have enough aircraft, but after a 5-year time-frame they are going to need some more. Everybody agrees that it

is a very useful aircraft. We had to measure the savings that we would achieve by stopping the production line against the cost of restarting the production line.

More significantly, we had to take a look at programs that our allies had committed themselves to. The Netherlands and Australia had committed themselves to buying some P-3's, and were we not to purchase any, their costs would have gone up to the point where they probably would have canceled their purchases, thereby depriving the Western world of an overall ASW capability.

Consequently we decided that we would put six P-3's in this budget. They will be very useful aircraft. This means that we can put some P-3A's in the Reserve Fleet and they will enable our allies to go ahead with their purchase, thereby increasing our overall ASW capability.

In the case of the A-10, it is true that the Air Force feels that for the active forces they have a sufficient number of aircraft. There was a consideration of phasing down the program to enable the contractor to develop foreign sales, and we have phased down the A-10 buy, if my memory serves me correctly, from 60 in fiscal year 1981 to 20 in fiscal year 1983.

Unfortunately, this may cause us Nunn amendment problems, but it is in the interest of keeping the program marketable overseas, because it would be a valuable program in the hands of our allies. If the production line shuts down they are obviously not going to buy it at the increased cost it would take to start the production line back up.

Chairman TOWER. Your time is up, Senator Quayle. I just thought of an interesting way to reduce defense spending, and that is to have every Member of the Senate and the House nominate some parochial interest in his own State or district that has been funded above request over the past few years.

Senator LEVIN?

Senator LEVIN. Thank you, Mr. Chairman.

NEED TO REDUCE BUDGET

Mr. Secretary, I am more than willing to consider what your rationale is for this budget and I'm going to suggest that in some areas I am going to be persuaded. But by the same token, I hope you will listen to my rationale and, indeed, the rationale of a number of other members of this committee for opposing the size of this budget, and to be open yourself to being persuaded.

First, I think that the huge increase in the defense budget is a declaration of economic war on America. The kinds of increases that you are calling for will sap the economic vitality which is ultimately the defense of this Nation. You cannot reduce the horrendous deficit which threatens us, with a 19-percent increase in defense spending—in real dollars a 13-percent increase in defense spending.

You cannot build support for needed improvements in our military posture when you lard the defense budget with gold-plated big ticket items. You cannot call on the American people to suffer through a recession made even more painful by cuts in jobs and

nutrition and education programs when you aren't willing to accept cuts or spend money in ways to help revitalize the economy.

Second, I don't think this budget represents a serious enough attempt to spend money efficiently. Last year you got a free ride from the administration because David Stockman said "there is so much waste in the Pentagon, it would just take us longer to get to it." Those are the words. You trumpet efforts to reduce the waste, but during that last year you opposed our efforts to increase competition. DOD claims savings of more than \$50 billion during its proposed 5-year defense plan, based on allegedly aggressive actions to control costs and increased Pentagon efficiency.

But many of the claims are hollow. DOD is fooling itself and trying to fool the American people with such claims. For instance, closer examination of these savings reveals that more than half of them result from doing business as usual, as it was done by the previous administration and probably for most of the past decade.

DOD claims huge savings by capping civilian pay. We have been capping civilian pay for years and each year we do that we save billions. Twenty-four billion dollars of DOD's alleged \$51 billion comes from continuing these pay caps, and an additional \$1.4 billion comes from continuing, for the military, military retirees, a once-a-year increase in retirement. But that is the same that we are doing for all other Federal retirees. That is not a Pentagon decision. That is an across-all-agencies decision.

Third, you say this budget assures our national defense needs. You focus on useless MX missile basing modes, on vulnerable B-1 bombers and outmoded nuclear aircraft carriers and in the process you threaten our ability to fund vitally needed readiness programs. The weapons systems you seek approval for now will have to be paid for in the years to come. You are more heavily mortgaging the future even than you are burdening the present.

As we struggle to pay for the big ticket systems we will end up taking money away from readiness and operations and maintenance and conventional forces, just as we unwisely did last year. If war comes, it may well come over competition for oil, yet our energy program aimed at producing alternatives to OPEC oil was cut \$2 billion last year and it is proposed that it be cut \$500 million this year; \$3 billion in energy alternatives is a better investment in defense than one \$3 billion aircraft carrier.

But this administration is radically weakening our energy policy. This budget just continues the wrong priorities—the wrong priorities economically, the wrong priorities administratively, and the wrong priorities militarily. In doing so, it gives defense a bad name and will end up eroding public support for it.

I cannot support these increases which are destructive to our military and to our economic stability and I believe that you will be surprised at how many of our colleagues won't either by the time this budget leaves the Congress.

You have been asked a question by Senator Quayle about our allies' burden-sharing. I have a resolution that proposes that the Japanese increase their defense spending to 1 measly percent of their gross national product. Our GNP percentage which we spend on the military is 5 percent. Now are you going to support that resolution, which now has 27 Senators cosponsoring it?

Mr. CARLUCCI. My own view, Senator Levin, first of all, with regard to your other comments, I obviously disagree, but thank you for your observations.

My own sense is that that is not appropriate with the Japanese. I don't think it is appropriate for me, in open hearing, to go into the kinds of diplomatic approaches that we have made with the Japanese. As you are aware, they are a consensus society. My own judgment is they are beginning to move in the right direction.

We have talked to them about roles and missions, rather than numerical increases. We have encouraged them to have a defense force which is sufficient to defend their homelands and their waters out to 1,000 miles. They and we believe this is a much more effective approach than trying to measure their progress by numbers, although we do encourage them to spend more.

Senator LEVIN. Is the same thing true with the Germans? Your quiet diplomacy is going to produce no increase in German defense spending this year. They committed themselves to a 3-percent real growth just a few years ago. That is the result of your quiet diplomacy.

Mr. CARLUCCI. I would submit, Senator Levin, that they are sovereign countries. I have had a number of years experience dealing with sovereign countries and public castigation very seldom works.

Senator LEVIN. Does this quiet diplomacy work with the Germans?

Mr. CARLUCCI. Quiet diplomacy, in my experience, has generally been far more effective than public castigation, yes, sir.

Senator LEVIN. Well, we see what quiet diplomacy has produced with our allies. Let me go back to some of the savings.

I have said here that \$24 billion of the \$51 billion savings is simply the capping of the civil servants' pay increase at 5 percent, which is done for civil service in all agencies.

Mr. CARLUCCI. Yes, sir, I referred to that in my opening remarks.

Senator LEVIN. I understand. But \$51 billion in savings claimed by Pentagon initiatives is not an accurate statement, when at least \$24 billion of that is by capping civil service pay increases, which is an across-agency decision made for all agencies, not by the Pentagon.

Let me go on to another argument.

Mr. CARLUCCI. It certainly is a savings in defense.

Senator LEVIN. It is not a Pentagon initiative. It is an across-agency decision.

Mr. CARLUCCI. It is an across-agency decision, but it's out of the defense budget.

Senator LEVIN. But you are claiming \$51 billion in savings with your management initiatives. I am saying on one item alone, just on \$24 of \$51 billion, that that savings comes from an administrative decision to cap civil service pay increases for all civilians in the Pentagon and outside of the Pentagon, at 5 percent.

More importantly, what I am saying is that that has been done year after year after year. There is no new saving by capping a civil service pay increase. But let me move on to another item.

And that is that you are claiming \$3.5 billion in savings from disallowed costs on procurement contracts audited by the Defense Contract Audit Agency. Isn't it true that the Defense Contract

Audit Agency traditionally has the job of disallowing those payments, that in previous years it has disallowed even more payments than the ones that you project for this year, and that is no new management initiative by the Pentagon? In 1980 the figure DCAA disallowed was \$3.5 billion. In 1979 the figure was \$8.1 billion. In 1978 the figure was \$3.4 billion.

Aren't those just typical annual savings by that agency?

Mr. CARLUCCI. Sir, I have testified before the Government Operations Committee on the changes that we have introduced in contracting audits. Previously there was no provision for resolution of a contract audit. This administration has put in a program which requires a resolution of a contract audit and, therefore, will lead to increased savings.

Mr. SHERICK. There has been a major change in how we handle contract audits. We think that our changes and improvements will increase savings.

Senator LEVIN. Well, my time is up. I simply gave the figures for prior years which are equal to your claimed savings.

Mr. CARLUCCI. We're talking about additional savings as a result of the resolution procedure that we've instituted.

Senator LEVIN. My time is up, Mr. Chairman.

Senator WARNER [presiding]. Before turning to Senator Denton, have the witnesses had adequate time to respond to the questions of the Senator from Michigan?

Mr. CARLUCCI. Well, if I may make just a couple of comments, because Senator Levin made a number of very blanket charges. This is certainly not a declaration of economic warfare on the American people. Indeed, as the Congress is very much aware, defense investment is productive investment.

What we are trying to do by our program, particularly in the area of acquisition initiatives, is attract additional capital into the defense area. And this does mean jobs. We do have a multiplier effect from defense spending. Indeed, every indication is that the multiplier effect in defense spending is larger than it is in many other areas of Government spending.

What we are proposing in defense cannot be termed a cut in jobs. It is an overall effort to reconstitute our might, to provide adequate security for our people, so that they can continue to have those jobs in tranquility.

Senator Levin differs from us on whether we are spending the money efficiently. I have laid the program out in some detail before the Congress. I welcome the GAO audit and I welcome the judgment of Congress as to whether we are doing the job as efficiently as possible.

Senator WARNER. Senator Denton?

Senator DENTON. Thank you, Mr. Chairman.

PRODUCING COST SAVINGS

Continuing on the subject of cost effectiveness, your testimony has highlighted the effect of the 32-point management system in producing cost savings. For the benefit of the record, can you give us the net total projected savings for fiscal year 1983 based upon the implementation of this program?

Is it your opinion that the acquisition reforms being implemented will produce even more substantial economies in subsequent budget requests, as that application of principle is spread in its effect and, if so, can you give us an estimate of the order of magnitude of that increase in economies?

Mr. CARLUCCI. Yes, sir.

The total anticipated savings as a result of the acquisition program, the 32-point program, in fiscal year 1983 is \$2.364 billion. I can give you a further breakdown on that if you would like. Lower cost alternatives are \$69 million; increased competition, \$14 million; productivity enhancement, \$59 million; multiyear contracting, \$125 million; economic production rates, \$568 million; elimination and reduction of marginal programs and systems, \$1.1 billion; and a miscellaneous category of other acquisition improvements, \$425 million.

That will expand in the outyears as our program takes hold, and we anticipate that the total savings, through the program, extending from 1981 to 1987, will be \$13.8 billion.

Senator DENTON. Thank you, sir.

Turning to another matter, in testimony before this committee last week, Secretary Weinberger spoke forcefully on the need to enhance both our power projection capabilities and preparation for mobilization. In testimony before the committee during the fiscal year 1982 authorization process, he stated, regarding the Middle East:

Today we are borrowing from strained resources to maintain any presence there at all. Our ability to project force into the region is inadequate and, unfortunately, dependent on our willingness to reduce our strength on other fronts so as to respond to a major challenge there.

I personally feel that we have never had as dire a mismatch between requirement for commitment and the capacity to produce the wherewithal for such commitment. I will go on.

Subsequent testimony has revealed that JSOP contingency planning must still revert to what some call double-dipping, some call duplicating deployment—the scheduled deployment of a unit to more than one mission area at a time. It has fallen to my experience to be at the Armed Forces Staff College at the time when that institution was responsible for developing those contingency planning methods—the computerized programing and so forth. It came to my attention while I was there that such duplication did exist. I assume you know what I am talking about; the computers would indicate that a particular unit was available to go to the Middle East, but you had to ask it another question to find out if that same unit wasn't also required in Korea or in Stuttgart. That situation still exists. I have had many in the U.S. Army and in the Department of Defense assure me that it still exists.

Other recent briefings, some classified, indicate that power projection inadequacies remain a serious problem. As you know, I, along with some of my colleagues on this committee, have introduced the Executive Mobilization Act that addresses directly the solution to the critical problem associated with rapid mobilization and deployment, especially regarding the Mideast.

It is my understanding that DOD is in the final phase of outlining its position on this legislation. Can you tell us for the record,

simply when you might expect to have a final Department position?

Mr. CARLUCCI. I am not familiar with who is working on that particular legislation.

Senator DENTON. All right, Secretary Carlucci, would you then submit some kind of estimate for the record in writing later on that? I assure you that I have been somewhat frustrated, having come to the conclusion that those in the Department of Defense and in the services, who know this problem, are as absolutely convinced as I am that we are brushing up against a bureaucratic inertia, which is very harmful in this specific case. So, I would like for you gentlemen to get down to cases on this.

[The information follows:]

EXECUTIVE MOBILIZATION ACT

Development of a Defense Department position in this matter has been underway for some time and is now in its final stage. The recommendations have been submitted to the Secretary for approval. A decision on the Department's position is expected within the next 2 weeks.

Lastly, Secretary Weinberger has perceptively pointed out the continuing and growing problems caused by technology transfers to the Soviet Union, both in the national and international arenas. I brought this up emphatically and definitively in a discussion with Director Webster of the FBI the other day, in which I showed the interlink between the respective departments, bureaus, and agencies working on this and the national security problem resulting from a given commercial transaction, using that in the very broadest terms between the Western free nations and the Soviet bloc between ourselves and the Soviet Union.

I also brought it up in a NATO context, with the end of developing a set of principles by which we can agree to examine the net effect as to advantage or disadvantage to a nation or NATO regarding such transactions as the gas pipeline from the Soviet Union, instead of perhaps relying, for example, on the new finds in the North Atlantic by Norway in gas and the oil in Nigeria.

It may be too late to address that question. If it is, I think it will be extremely unfortunate. But given this mutual concern among agencies and no effort whatever yet that I have seen in Washington to develop even an ad hoc committee approach to examining the effect of, say, grain or technology transfers, licit or illicit, do you have any knowledge of something being done to coordinate the efforts of these departments in addressing what I consider to be a transcendent critical problem in the area of security?

The one example that you are familiar with, but perhaps the press or the audience is not, is the instance of a multimillion-profit that a corporation in the United States made selling to the Soviet Union the ball bearings and production techniques required for accuracy in ICBM targeting and flight. That has cost us tens of billions of dollars in research and development. I don't see any end to what it has cost us. I see no existing remedy to that kind of situation. Do you see anything happening to institutionally improve or alleviate the situation?

Mr. CARLUCCI. First of all, let me say that I agree thoroughly with your thesis that we have allowed too much technology to be

transferred to the Soviets. Some of it, of course, is stolen, but all too frequently it is transferred through open sources. Indeed, such things as environmental impact statements often provide things that are useful to the Soviets.

Other means are through false buying organizations, fronts, or through third countries. We need a coordinated approach with our allies if we are going to deal with this situation, and we need a good mechanism to weigh the overall national interest against the interest of a particular firm, because that always turns out to be the issue. Usually the argument is: Oh, well, if the American firm doesn't sell it, some foreign firm will step in. But we need to exercise leadership in this area.

Second, it is clear the foreign firms will continue to do this unless we exercise some discipline ourselves. Probably no subject has been given greater attention by the executive branch. It is true there is no formal statutory mechanism for dealing with this, although the Defense Department has statutory authority to review transfers that fall into the national security area, and we take that responsibility very seriously.

There is a functioning interagency group, so-called senior interdepartmental group, which is examining this issue. There is also a working group chaired by the National Security Council which is looking at some of our more immediate problems related to the Polish situation. I myself have had a number of meetings with my counterparts in State and the Department of Commerce on this subject.

There are some long-range issues that still need to be resolved, but by and large, I think we are moving toward a uniform and orderly process.

Senator DENTON. My time is up, but it will not only have to be American, it will have to be at least NATO-wide and I'll be asking you later just who participates in this group and what departments are represented. I believe an awful lot of them are going to have to be.

Thank you, Mr. Chairman. Thank you, Mr. Secretary.

Senator WARNER. Senator Hart?

Senator HART. Thank you, Mr. Chairman.

Mr. Secretary, this is the beginning of my 8th year on this committee and there is a disturbing pattern evolving this year that is unique. Let me outline it, if I may.

There is pressure from some quarters—I'm not quite sure where—to "fast-track" this defense budget, I guess on the grounds that the Soviets are way ahead of us and we have got to catch up and it's the obligation of Congress to move this budget through much faster than at any other time. Yet in spite of that urgency, this committee, to my knowledge, has not received its annual posture statement from the Department. I know the Secretary was here and testified, but to my knowledge we have not received the annual posture statement.

Mr. CARLUCCI. It was delivered this morning, Senator Hart.

Senator HART. It will be delivered?

Mr. CARLUCCI. It was delivered this morning.

Senator HART. That's this document? This is the posture statement?

Mr. CARLUCCI. Yes, sir.

Senator HART. If it is so urgent, how come we only got it about 1 hour ago? How can we ask intelligent questions on a 300-page document that we received about 1 hour ago?

Mr. CARLUCCI. My understanding is the normal procedure is to submit the posture statement with the budget, which we have done. The budget just went up today.

Senator HART. Well, there are news reports in today's paper on the posture statement, and those reports were in the paper before this committee ever received the document, which is an additional curiosity. This is titled "annual report." I wasn't aware that this was your posture statement.

We also normally have the Joint Chiefs here. They haven't been here yet and I understand there is no plan to have a hearing with them. General Jones was here last week or the week before, but none of his colleagues were here. They will appear with their individual service budget requests, but normally we have the Secretary with the Joint Chiefs, and we can have hearings and ask questions of all of them.

Mr. CARLUCCI. I'm sure they would be delighted to appear.

Senator HART. I'm sure they would be, too, Mr. Secretary, but where are they?

Mr. CARLUCCI. This was to be a hearing on the management, economies, and inefficiencies.

Mr. HART. My point is this: You're never going to get the huge budget you are asking for here unless you have a consensus among the American people. There is no clear relationship between this budget request and any kind of overall strategy on foreign policy for this country. And unless you have that, unless you do more than just talk about the Soviet threat, I don't see any consensus forming, certainly not where the purpose of the administration is to move as fast as they can and ultimately to occupy close to 40 percent of the Federal budget with defense spending in the mid-to-late 1980's—phenomenal course of events in a nonwartime period.

There are both budget and strategy gap here. It was reported back in early January that there was a document in the Department which said that to carry out the military goals the administration has set for itself and the way it has analyzed the threat over the next 5 years, you are about \$750 billion short.

Is that press report wrong, and if it's not wrong, could we see the document?

Mr. CARLUCCI. Well, let me make several comments. One is that it is the purpose of the posture statement to relate strategy to what we have requested in the Defense budget, and I hope that by the time you have read it and digested it you will agree that there is a strategy.

Second, I believe that if the Defense Department budget does get up to 40 percent of the Federal budget that will still be less than it was when Secretary Weinberger and I were in OMB back in 1970. I can remember the Defense Department budget being about 40 percent of the Federal budget in 1970 and 1971.

Senator HART. I think we had about 500,000 men in Vietnam at that time.

Mr. CARLUCCI. Even prior to Vietnam it was in the 40's. In fact, I think it was even higher than that prior to Vietnam. It has sunk to about 24 percent of the Federal budget. The 1983 budget will take it back up to 29 percent of the Federal budget.

The \$750 billion figure is not an accurate figure.

Senator HART. There is no such document in the Department that you are aware of?

Mr. CARLUCCI. There is a chart that was flashed on a wall that said if the Joint Chiefs decided they wanted to take on several wars at once and wanted to do everything that they thought could be involved in every conceivable contingency, you might have a defense budget of \$750 billion more than we are requesting now.

That is no way implies that \$750 billion more is needed to carry out the strategy laid before you in this budget. It is a totally misleading figure, again made public through a leak. It bears no relationship to reality.

Senator HART. Would you provide that document to this committee?

Mr. CARLUCCI. Well, it is a classified document.

Senator HART. We don't leak any more than the administration. [The information follows:]

The briefing, entitled "Planning Defense Resources to Match Strategy," was one of the many inter-related parts of the annual DOD Planning, Programming and Budgeting cycle. It was strictly an internal informational briefing and has no meaning outside the Departments' internal planning process. The briefing package was neither a decision document nor a policy directive. It has been widely misquoted, taken out of context, and misinterpreted. I feel that the briefing charts by themselves do not provide the full story necessary for your committee's review and I prefer not to have this material placed in the record.

CHEMICAL WARFARE THREAT

The Secretary and the administration have made a great deal out of the chemical warfare threat and has frankly stated that the country is going to have to spend billions, if not tens of billions, of dollars to counter it. The document that I have just had a very brief chance to look at here, on page 38 of one section, says the basic principle of the Soviet military toxic chemical doctrine is to achieve surprise by using massive quantities of chemical agents against unprotected troops or against equipment or on terrain to deny its use.

That being the case, why has the funding for chemical defensive equipment been cut from \$174 million in fiscal year 1982 to \$119 million this year?

Mr. CARLUCCI. I think that figure was wrong. We are requesting some \$700 or so million for chemical warfare, of which about 80 percent is defensive equipment. That would extend to something less than \$6 billion over the 1983 to 1987 timeframe. Once again, 80 percent of that is for defensive equipment.

Senator HART. That is not my understanding.

Mr. CARLUCCI. The figure for binaries in 1982 was \$36.3; in 1984 it goes up to \$104. Other is \$496 in 1982. It goes up to \$601 in 1983, giving you a total of \$705 million in fiscal year 1983.

Senator HART. Well, Mr. Secretary, apparently we are singing out of different hymnbooks because according to page III-146, in

fiscal year 1981, procurement of defense equipment was \$72; in fiscal year 1982, \$174 million; and we plan \$119 million for fiscal year 1983.

Mr. CARLUCCI. That might include defensive as well as binary.

Senator HART. It says defensive equipment.

Mr. CARLUCCI. Well, that is just procurement. The procurement account in 1982 is zero for binaries, \$224 million for defensive equipment. In 1983, it is \$24 million for binaries and \$189 million for defensive equipment. Possibly that explains it. There also was \$99 million in fiscal year 1982 for Army stock fund for war reserves of chemical defensive equipment, and that is \$76 million in fiscal year 1983.

NUCLEAR-POWERED AIRCRAFT CARRIERS

Senator HART. Well, I can't reconcile that with what I just read. One final question, Mr. Secretary. As you well know, over the years—over the last 2 or 3 years certainly—Congress and this committee have been trying to move various administrations toward supplementing the nuclear-powered aircraft carriers with less expensive light aircraft carriers. I see nothing in this document which suggests you are aware of that effort or that there is any support whatsoever in this Department or in the administration for that goal.

Is that ever going to happen?

Mr. CARLUCCI. We are certainly cognizant of the effort. Indeed, the Navy has studied that subject intensively and I believe has provided to you on that—

Senator HART. I understand that, but where are the light carriers in this document?

Mr. CARLUCCI. The decision was to build two more of the *Nimitz*-class carriers, which means we did not decide in favor of the light carriers based on the Secretary's decision and on the basis of the briefing provided by the Navy. They feel the large carrier is more economical in terms of carrier deck space that you get per aircraft and that the large carrier is more survivable.

Hence we made the decision to go with the two larger aircraft carriers as opposed to the lighter ones.

Senator HART. I said supplement, Mr. Secretary. I didn't say either/or. There is apparently no effort on the part of this department or this administration to even consider the light carrier alternative. I have heard all the arguments. I have heard all the briefings. I am suggesting that until this administration and this Department take cognizance of the congressional support for light carriers to supplement the large-deck carriers, your support for those large-deck carriers is going to continue to erode.

Thank you, Mr. Chairman.

Senator WARNER. It is the Chair's desire to conclude this hearing unless there are Senators present who desire to ask more questions.

Senator EXON. Mr. Chairman?

Senator WARNER. Senator Exon.

Senator EXON. Mr. Secretary, I have been looking through this annual report to the Congress trying to find some place where we

might be able to save some money without seriously affecting our overall strength. I think I have found one I'd like to ask you about.

BATTLESHIPS

Reactivation of four *Iowa*-class battleships will allow rapid expansion of the surface combatant battle group, armed with a Tomahawk and a Harpoon missile, as well as 16-inch guns. These ships will make a formidable addition to our Active Force, and I see that in 1983 this program is going to cost us \$445 million and an additional \$500 million in 1984. That looks like \$½ billion there in 1 year and \$1 billion in 2 years.

Wouldn't that be a good place to cut if we had to cut?

Mr. CARLUCCI. I think you are probably reading TOA figures and not outlay figures. The answer is that we need more capability. We need better platforms for our Tomahawk missiles. We can get these platforms more effectively and cheaper by reactivating the battleships. They are still the most survivable ships ever built. They would give us substantial power projection capabilities.

We feel they are a cost-effective addition to the force. I'm sure the Navy would be prepared to go into this with you at much greater length.

COST-EFFECTIVENESS OF THE FORCE

Senator EXON. Now let's go into cost-effectiveness of the force—the overall force. We're turning to the window of vulnerability which I mentioned in my first round of questioning. You indicated that we're going to save about \$100 million a year by starting to pull these Titans out.

Incidentally, I would say, Mr. Secretary, that I don't understand why it takes 3 weeks for your Department to answer a rather simple question from a U.S. Senator. I wrote to the Secretary of the Air Force regarding this Titan matter on January 15. I have still not heard from him in response to my questions.

Let me ask this: If you were a Soviet planner and you knew that we were going to reactivate the *Iowa*, would you be more concerned about that or would you be more concerned about the Titan missiles, the 9-megaton warheads that we unilaterally, during a time when we are in arms control negotiations with the Soviet Union, supposedly, are dismantling our largest missile, although it is our oldest?

What sense does that make? It cannot be justified from the standpoint of saving money; \$300 million over a 3-year period, \$100 million for 1 year out of a \$216 billion budget. Review that for me and tell me how in the world did you arrive at such a decision?

Mr. CARLUCCI. There are several factors that go into that calculation, Senator Exon. One, of course, is that the Titan missile, while it is large, it is a very old missile and it does not have the accuracy that is needed today. It does not have hard target capability. It is what some people have termed a city buster.

Second, it is vulnerable to Soviet attack and—

Senator EXON. Just a minute, Mr. Chairman. It is vulnerable to Soviet attack. Will not the MX missiles be equally as vulnerable when we place them in the Minuteman silo?

Mr. CARLUCCI. We're doing that as an interim solution. We are exploring options for long-term survivable basing modes for the MX.

Senator EXON. But you would have to agree with me that those Titans are no more vulnerable than the MX will be when we put it in those Titan silos 3 years from now?

Mr. CARLUCCI. As an interim measure we are putting some of the MX's in the Minuteman silos.

But, third, these are very old systems and there are legitimate safety problems that we have to worry about. So that, coupled with the need to get some savings in order to modernize our force, has led to the Titan deactivation decision.

Senator EXON. You don't really mean to tell me that \$100 million a year is a significant enough saving that you thought that was important to modernize the forces?

Mr. CARLUCCI. Senator, we have looked for savings wherever we can get them in this budget and, as I understand the tenor of this hearing, it is incumbent on us to try and pick up any savings we can, no matter how small. And \$75-\$80 million is a significant amount.

Senator EXON. If you were a Soviet planner, would you be pleased that we were doing away with the Titans at the same time we are bringing old World War II battleships out of mothballs?

Mr. CARLUCCI. I would be very concerned about a cruise missile carrier with the ability and capability that our battleships have. Yes, sir, I think they worry about the force projection capability as much as they do about the strategic capability.

Senator EXON. Thank you, Mr. Secretary. Thank you, Mr. Chairman.

Chairman TOWER [presiding]. Senator Levin?

Senator LEVIN. I just have a few additional questions, Mr. Chairman.

Mr. Carlucci, you referred to a chart which was flashed on the wall which showed \$750 billion in underfunding, and you indicated to Senator Hart that you would supply an unclassified version of that.

Mr. CARLUCCI. No, I said it would be classified.

Senator LEVIN. No, I thought you said you were going to supply an unclassified version to the committee.

Mr. CARLUCCI. No, sir. I said it was a classified document and I would furnish it on a classified basis.

Senator LEVIN. That's fine. My question is this: In addition to the chart, were there any other documents describing that matter?

Mr. CARLUCCI. No. This was a very, very minor part of an overall briefing.

Senator LEVIN. There's nothing else which goes into any detail on the \$750 billion other than that one chart?

Mr. CARLUCCI. Not that I have seen. There obviously are some JCS planning documents on which the figure was based, but we did not review it. We considered the figure absurd and did not spend any time on it.

Senator LEVIN. Will you supply the JCS planning documents to us on a classified basis?

Mr. CARLUCCI. I would have to look at prior practice and precedent.

Senator LEVIN. Will you let us know what you will or will not do for the record?

Mr. CARLUCCI. Yes.

[The information follows:]

The document referred to is the Joint Strategic Planning Document (JSPD), used during the annual planning cycle of the DOD Planning Programming and Budgeting System. It does not represent an approved Department of Defense position and is released only to the National Command Authorities and the Department of Defense.

Senator LEVIN. Second, last year the Soviets and we both issued booklets, our booklet trying to show how powerful they are, their book trying to show how militarily powerful we are. Neither booklet showed any comparison of the two powers. Shortly after those publications, I asked you whether or not you would get us a comparison of the two powers and you indicated to me that you would release a NATO-Warsaw Pact military balance study and that you expected to release it before the end of the year.

I don't believe it has yet been released and I am wondering whether or not you have a date now that you project for the release of that study.

Mr. CARLUCCI. There is, along with this annual posture statement, a classified document that has considerable net assessment data in it. If that does not satisfy you, I would be prepared to provide additional information.

Senator LEVIN. It is not satisfying me. You say in your October 21 letter to me that in addition you recognize, and these are your words, that it could be useful to supply European publics with the type of balance information which I described in my letter. The United States is working with our NATO allies——

Mr. CARLUCCI. Yes; that is a NATO undertaking.

Senator LEVIN. And you said you expected that it would be released by the end of the year. It wasn't. Can you tell me when it will be released?

Mr. CARLUCCI. I can't off the top of my head because it is not something that is under our direct control, but I would be glad to submit something to you on that.

Senator LEVIN. That would be helpful for the record.

[The information follows:]

NATO/WARSAW PACT MILITARY BALANCE STUDY

NATO is currently approaching final action on approval of a force comparison of NATO and Warsaw Pact forces, for unclassified release. If no major obstacle to approval of the text arises in the next working review of the draft, final approval and agreement for unclassified release is expected by the end of March, with publication following thereafter.

Senator LEVIN. Last year I introduced, along with Senator Cohen, a provisions to stimulate competition in procurement by the Pentagon. Now the Defense Department came to the Senate to this committee and suggested that a number of changes be made in that amendment. We made a number of changes and obtained at least Defense Department acquiescence on it, and the Senate adopted that amendment to stimulate competition in Defense procurement.

We know that something like 60 percent of the Pentagon contracts are sole source contracts, and I think we all are interested in increasing competition. After that amendment was adopted by the Senate, after the committee worked on it, we went over it at conference and found that the House was opposed to it and they were reading from your letter to them saying that you were opposed to it.

My question is this: This legislation is already introduced again here and in the House. Are you going to be able to support it this year?

Mr. CARLUCCI. Well, first of all, I do have some difference on the figures, but no point getting into that kind of discussion at this point. Let me say that we fully agree with the importance of stimulating competition in defense purchases. And, as you are aware, I have instituted a comprehensive program designed to do this. It includes designating individuals at each hearing activity, advocates for competition, and includes establishing goals for increasing competition in all viable organizations, insuring that each commander understands his responsibility for maximum feasible competition, making competition a matter of special interest.

So we share the same goal. The question we have with the amendment is whether this amendment will help us achieve that goal or whether it will create additional paperwork which might slow down our procurement process. At this point I can't really say whether we would support it, but we are certainly prepared to work with you to explain to you some of the problems we have with it and we could see if it could be modified to meet our requirements.

Senator LEVIN. Mr. Chairman, my time is up. I do have additional questions for the record which apparently I must get permission to file from the chairman.

Senator WARNER [presiding]. Do you desire to put additional questions into the record?

Senator LEVIN. Yes.

Senator WARNER. The record will stay open until 2:30 p.m. for purposes of receiving questions.

[Questions submitted to be answered for the record by Deputy Defense Secretary Carlucci follow:]

QUESTIONS SUBMITTED BY SENATOR STROM THURMOND

Senator THURMOND. Mr. Secretary, I would like to welcome you to these proceedings, and commend you on your continued efforts to strengthen our defenses. This year's defense budget is quite large, and I understand that multi-year procurement is part of the large increase. The American people support a strong defense, and in the face of a continued massive Soviet build up of both conventional and strategic forces, it is imperative that we continue to strengthen our defenses. The American people will support us, but our spending must be responsible and fair. Last year you stated that you favored eliminating some programs to save money rather than a reduction of funding across the board. What programs have you eliminated and what are the savings?

Answer. The following table shows the 60 specific items I was referring to in my statement.

TOTAL OBLIGATIONAL AUTHORITY (JAN. 30, 1982)

[in millions of dollars saved]

Code 1—Acquisition initiatives	Appr.	Fiscal year—							
		1981	1982	1983	1984	1985	1986	1987	Total
(AX) G. ELIMINATION/REDUCTION OF MARGINAL PROGRAMS/SYSTEMS									
1. E-4B procurement	APAF			278.7	290.8				569.5
2. EC-135 airborne launch control systems	APAF		10.4	22.8					33.2
3. Titan missile phase out	MPAF		31.1	30.1	23.4	21.3	32.7		138.6
4. KC-135	APAF				28.9	68.5	69.6		167.0
	ROTEAF			10.3	15.8	7.8	9		34.8
5. B-52 aircraft modification	APAF			1	21.0	45.3	132.5		198.9
	ROTEAF			7.0	15.9	1			23.0
	OWAF				1	1.9	9.4		11.4
	MPAF				-1.0	-1.4	-3		-2.7
6. Minuteman II	PPAF					166.0	212.0		378.0
7. Expendable drones	ROTEAF			5.1	8.5				24.7
	MPAF			26.7	58.1	6.8	4.3		24.7
	MCAF			2		52.2	86.7		223.7
	OWAF			1	1				3
	MPAF			.8		2	2		6
	OPAF		6.6			.8	.8		3.2
8. Laser acquisition	ROTEAF		13.0	13.0	19.0	17.0	33.0	41.0	136.0
9. 8-inch Antiradiation projectile	OPAF		13.0	14.6	15.9	14.2	12.9	13.5	71.1
10. AN/SPS-52 radar	OPAF				7.9	7.8	7.7	8.1	31.5
11. Channel Finder	OPAF								54.9
12. Gun fire control systems	OPAF			24.1	20.3		10.5		235.9
13. Smsordalts: Tartar	OPAF			42.6	60.0	26.0	57.9	49.4	516.7
14. 5-inch GP	OPAF		16.5	29.8	86.8	112.8	112.6	158.2	168.0
15. Advanced base function components	OPAF			10.0	15.0	48.0	41.0	54.0	442.0
16. Ship systems modifications	OPAF			100.6	159.0		17.8	164.6	440.3
17. NOSS	ROTEAF		46.1	87.9	115.7	105.7	74.2		440.3
18. Weaponizing Proto	ROTEAF		2.0	3.0	4.0	6.6	8.2		23.8
19. SOJS (THOR)	ROTEAF		10.1	22.3	35.6	61.0	76.3	80.5	285.8
20. CAML	ROTEAF		1.7	5.7	6.7	5.6	3	3	26.0
21. Super torch	ROTEAF		3.2	3.2	3.5	3.6	3.6	3.5	20.6
22. VCK	ROTEAF		32.6						32.6
23. TEWDS	ROTEAF		8.8	6.9	19.8	24.4	29.5	31.2	120.6

TOTAL OBLIGATIONAL AUTHORITY (JAN. 30, 1982)—Continued

[In millions of dollars saved]

Code 1.—Acquisition initiatives	Appn.	Fiscal year—							Total
		1981	1982	1983	1984	1985	1986	1987	
24. MADAIR.....	ROTEN		2.3	3.7	4.0	4.1	4.1	4.3	22.5
25. Buried manhunt.....	ROTEN		1.8	5.0	6.6	6.4	7.9	8.3	36.0
26. IIR Harpoon.....	ROTEN		38.6	39.8	32.1	23.1	3.6	3.8	141.0
27. HY 130 steel.....	ROTEN			1.8					1.8
28. MDM.....	ROTEN		7	38.0	46.0	42.0	38.0	35.0	199.7
29. RECO.....	ROTEN			1.2	3.5	5.9	6.0	5.9	22.5
30. EMCARD.....	ROTEN		2.4	2.8	3.1	2.7	2.7	2.8	16.5
31. Mobile target range.....	ROTEN		6.5	4.1					10.6
32. DIASS.....	ROTEN			3.7	1.4	1.3	.6	.6	7.6
33. RFX.....	ROTEN			17.0	19.0	36.1	35.8	37.8	145.7
34. Dual Mini Sins.....	ROTEN		1.0	.5					1.5
35. A6/AWASCS.....	ROTEN			22.4	56.1	37.7	8.9		125.1
36. Linear Chair.....	ROTEN		4.0	1.4					5.4
37. VLS ASROC.....	ROTEN		15.3	27.6	20.4	12.7	.5	.5	77.0
38. AEPS II.....	ROTEN			2.7	3.2	3.3	3.6	3.8	16.6
39. SEAFIRE.....	ROTEN		1.8	17.0	17.5	16.5	7.0	7.3	67.1
40. FIREBRAND.....	ROTEN			23.7	35.0	28.7	20.5	8.9	116.8
41. CH-46 ext. tank.....	ROTEN			1.2					1.2
42. PCOTES.....	ROTEN		5.0	5.0					10.0
43. LINEAR ECM.....	ROTEN			7.9	3.7	3.1			14.7
44. Navy future comm.....	ROTEN		2.7	5.0	5.9	6.2	6.9	7.2	33.9
45. SXIF closed.....	ROTEDA		18.1	22.6	14.2	5.7	5.5		66.1
46. NAVOSH.....	MCN			11.0	14.0	13.8	6.0	6.0	50.8
	OPN		3.5	3.0	3.0	3.0	3.0	3.0	18.5
	OMN		2.5	3.0	3.0	3.0	3.0	3.0	17.5
47. H-46 emergency egress mod.....	APN			1.7	1.9	.9	.1		4.6
48. H-46 AAR mod.....	APN			1.4	3.6	5.8	11.0	.5	22.3
49. H-46 ground prox modification.....	APN				5.6	5.8	3.6		15.0
50. S-3 ejection seat modification.....	APN					2.1	2.1	1.9	6.1
51. S-3 IFR probe modification.....	APN			1.7	1.7				3.4
52. S-3 TACAN EXCAP modification.....	APN			1.2	2.2	1.1	1.1		5.6
53. P-3 TACNAV mod.....	APN			30.9	22.1	5.3	3		58.6

TOTAL OBLIGATIONAL AUTHORITY (JAN. 30, 1982)—Continued

(In millions of dollars saved)

Code 1.—Acquisition initiatives	Appn.	Fiscal year—						Total
		1981	1982	1983	1984	1985	1986	
54. 24 mm gun pod mod.....	APN				8.9	33.6	64.6	107.1
55. ECM (ALR-45) mod.....	APN			36.3	36.8			73.1
56. H-46 fuel tanks modification.....	APN					6.9	7.3	15.0
57. F-4, APR-43 modification.....	APN			4.8	6.0	1.1	.6	12.5
58. F-4, APR-118 modification.....	APN			3.5	2.4	.8	.4	7.1
59. A6 (AWSACS).....	APN					4.9	107.7	214.3
60. P-3C (Multi-Signal/BITE).....	APN			5.7	5.6	4.9	3.9	20.1
Total.....		12.4	292.3	1,103.9	1,420.2	1,130.7	1,400.6	6,207.5

Senator THURMOND. How much of the fiscal year 1983 budget is invested in multiyear procurement and what savings should this multiyear procurement realize?

Answer. The fiscal year 1983 budget includes an additional \$545.9 million for the continuation of multiyear contracts begun in fiscal year 1982 and for new multiyear contracts proposed for fiscal year 1983. \$32.4 million of the \$545.9 million is associated with continuation of the C-2 multiyear procurement initiated in fiscal year 1982 and \$513.5 million is associated with the fiscal year 1983 multiyear initiatives. The Department projects savings of \$1,080.1 million for the multiyear procurements begun in fiscal year 1982 and fiscal year 1983.

TECHNOLOGICAL LEAD

Senator THURMOND. Mr. Secretary, last July you stated before this Committee that, "Our best hope is to take advantage of our technological lead. The M-1 tank, the Trident submarine, the F-15 fighter, and the MX missile are designed to do that. These systems can permit us to 'take charge' of the course of a battle rather than force us into a 'one-for-one war' of attrition." When will we reach a level of deployment of these systems to give us this capability?

Answer. The purpose of the development and procurement of any new weapon system, of which the four cited are major examples, is to strengthen or at least maintain the existing U.S. technological advantage. Because fiscal realities preclude matching the Soviets one-for-one, compensating for their numerical superiority through technological leadership is a continuing and undiminishing challenge. Barring unexpected scientific breakthroughs by the U.S.S.R., and despite the advancing sophistication of Soviet weaponry, U.S. technical superiority will be preserved provided currently programmed introduction and deployment schedules for new weapon systems can be maintained. To precisely predict the point at which this superiority is sufficient to assure command of the battlefield is precluded by the numerous complex variables affecting the military balance equation. No one weapon system mentioned above, nor the four together, will dominate a conflict. Rather, the synergistic employment of all existing and planned systems will provide us the necessary military capability in the face of an increasing Soviet threat.

AH-64 COST GROWTH

Senator THURMOND. The AH-64 has developed very serious cost growth problems. Would you include it with these other systems of critical importance or do you consider it of less importance?

Answer. The Army considers the AH-64 to be of equivalent importance as the M1 Tank and F15 Fighter in the tactical warfare arena. This importance was demonstrated by the Army's reprogramming efforts to compensate for the system's cost growth. The AH-64 is a force multiplier which will permit us to control the course of battle, even during inclement weather or night.

STATUS OF ACQUISITION IMPROVEMENT INITIATIVES

Senator THURMOND. Mr. Secretary, what is the present status of your 32 initiatives?

Answer. My basic statement summarizes the status of our 32 management initiatives and highlights potential cost savings already identified in some initiatives. I have assigned a high level, permanent Steering Group to oversee the progress being made on the remaining initiatives where there are barriers to implementation.

SAVINGS

Senator THURMOND. What savings have been realized through the 32 initiatives?

Answer. The following table summarizes savings already achieved or specifically programmed:

TOTAL OBLIGATIONAL AUTHORITY

[Dollars in billions]

	Fiscal year—							Total
	1981	1982	1983	1984	1985	1986	1987	
Pay adjustment.....	0.1	2.1	4.0	5.1	5.9	6.5	7.1	30.8
Acquisition.....	.2	1.3	2.4	2.8	2.1	3.3	1.7	13.8

TOTAL OBLIGATIONAL AUTHORITY—Continued

(Dollars in billions)

	Fiscal year—							Total
	1981	1982	1983	1984	1985	1986	1987	
Operations.....	.3	.9	1.0	1.1	1.1	1.2	1.3	6.9
Total.....	.5	4.3	7.4	9.0	9.1	11.0	10.1	51.5

Note.—Those savings categorized as Acquisition result from the 32 initiatives.

EUROPEAN DEFENSE IMPROVEMENTS

Senator THURMOND. Mr. Secretary, the United States has undertaken a large scale and expensive program of strengthening our defense posture. What steps are our NATO allies taking to strengthen the overall NATO program?

Answer. As you know, we have been pressing the allies hard both to increase the resources they devote to defense and to provide large amounts of facilities and host nation support for U.S. forces stationed in Europe or scheduled for early reinforcement. This involves bilateral arrangements between ourselves and key allied governments [deleted] and expanded common infrastructure support of programs designed to support the U.S. reinforcement effort.

Under the most prominent measures of allied performance—achievement of the 3 percent goal for annual real increases in defense spending—the Allies did reasonably well in 1981, with eight countries achieving increases in the 3 percent region and the weighted non-US/NATO real increases estimated at some 2.7 percent. NATO also registered solid increases in output but, in view of the steady increase in Soviet military capabilities, there is little question we and our allies all need to do ever more.

The European NATO members spent some \$112 billion on defense in 1981. Of this total, about \$25 billion went for capital equipment. The equipment to be introduced into allied inventories in 1982 includes more than 400 main battle tanks (Leopard II, Scorpion, and AMX) and nearly 900 other armored vehicles; more than 1,400 antiarmor missile systems (including TOW, MILAN and HOT); 2,500 handheld rocket launchers and 400 other antiarmor weapons, a number of new ships including a carrier/cruiser, nine destroyers, six mine warfare vessels, 11 fast patrol boats and four submarines; nearly 250 combat aircraft (including F-16s and Tornados) and nearly 75 helicopters and maritime patrol aircraft.

JAPANESE DEFENSE BUDGET

Senator THURMOND. Do you find Japan's defense spending adequate in light of her growing defense responsibilities?

Answer. Japan's defense spending increase of 7.8 percent for 1982 coming at a time when other government expenditures are being held to an average of 2 percent or less, demonstrates a commendable awareness of the need and a most appropriate change of priorities. It represents an important first step toward obtaining meaningful self-defense capability on the part of the Japanese government. The 1982 budget constitutes a sound beginning for the increased responsibilities the Japanese will assume in joint burden sharing in the Far East in cooperation with the United States.

MEDIUM DEPTH MINE

Senator THURMOND. Mr. Secretary, the Soviets are making great strides in their ship building for both surface ships and submarines. With our smaller navy, mine warfare is of great importance. Yet, funds for the Medium Depth Mine have been deleted from the fiscal year 1983 budget. Mine warfare has failed to receive proper consideration in recent years and this budget deletion indicates further downgrading of the importance of mine warfare. The effects of mining operations were made apparent during the Vietnam War when the United States mined Haiphong Harbor. What is the status of the Medium Depth Mine program?

Answer. Mine Warfare remains one of the Navy's top priorities. In the past three and one half years, Navy has added two new designs for mine countermeasure vessels in addition to accelerating mine development capacity.

There is still a need for a mine to complement the Captor and Quickstrike mines. However, the costly and lengthy Medium Depth Mine (MDM) program was terminated to permit further investigation of alternatives that could be developed earlier and at less cost. Of the \$15 million provided in fiscal year 1982 for development of the MDM, \$7.4 million has been restructured into other high priority research, development, test and evaluation programs. Expenditure of \$6.4 million has been deferred pending redirection of the MDM program. However, \$1.2 million is being used to investigate a Captor variant that could operate in some waters intended for MDM and also to investigate other alternatives including a cooperative mine development program with the British Navy.

MINE INVENTORY

Senator THURMOND. Do you have enough mines to adequately cover your priority mining areas?

Answer. At the present time we have a significant number of obsolescent bottom type mines which could be used to mine most of the priority areas. However, as Soviet mine countermeasures (MCM) technology advances, these mines are rapidly losing their effectiveness and improved mines are needed. We are moving ahead in the development and procurement of improved mines through two types of new mines. The Captor mine is in procurement and production is well underway and will reach a delivery rate of 600 per year in fiscal year 1984. Procurement will continue until a planning objective of more than [deleted] mines is achieved. Development continues on new air and submarine launched mines of the Quickstrike/SLMM series. These will greatly enhance our already significant capability in bottom mines. We plan to reach the required inventory level for these improved mines by the end of the [deleted] delivery period.

QUESTIONS SUBMITTED BY SENATOR JOHN W. WARNER

BINARY CHEMICAL MUNITIONS

Senator WARNER. Mr. Secretary, the President has, correctly in my opinion, certified the need for the United States to begin production of modern binary chemical munitions. As you know, congressional approval of the funds associated with this program is likely to entail a heated debate.

Would you give the committee your assessment of the importance that should be attached to proceeding with the replacement of our existing chemical stockpile and the likelihood that the President will involve himself in informing the American people of the need for binary production?

Answer. Proceeding with obtaining binary munitions is essential to the national interest as the President certified. The Soviet chemical warfare threat and capability imbalance negates our conventional force as a credible deterrent to war. Chemical warfare defense improvements alone leave the unencumbered Soviets a significant advantage. Our current retaliatory stockpile is not a credible deterrent to chemical warfare. Binary munition production will lend to a credible and realistic deterrent to chemical warfare, and will provide leverage in arms control negotiations. Therefore, production of binary munitions must begin. I do not know the likelihood that the President will personally inform the American people of the need, but I do know he does believe production is essential.

SVERDLOVSK INCIDENT

Senator WARNER. Mr. Secretary, this morning's Washington Post indicates that Secretary Weinberger's posture statement for fiscal year 1983 suggests that there is substantial evidence that the Soviet Union is, in fact, violating the international ban on biological weapon production.

Is there more information available than has been disclosed to date, that can be discussed in open session? What are the implications of such a violation for the prospects for U.S.-Soviet arms control negotiations in general and a chemical warfare disarmament agreement in particular?

Answer. Evidence on the Sverdlovsk incident is substantial from the standpoint that it does strongly indicate that activities at the Sverdlovsk biological facility went beyond those that are allowed for peaceful purposes under the terms of the Biological Weapons Convention of 1972. However, the evidence consists of intelligence of a sensitive nature and cannot be declassified. The Soviet explanation of the

incident remains unacceptable on the basis of the intelligence we have on the incident.

The United States is highly disturbed by the growing evidence about the use of lethal toxin and chemical weapons. Also, we remain dissatisfied that the Soviet Union has never satisfactorily explained the 1979 anthrax outbreak in Sverdlovsk. By remaining altogether unwilling to discuss both the Sverdlovsk incident and the use of toxins or other chemical weapons, the Soviet Union simply deepens the suspicions and anxiety of all people of good will. By refusing to discuss in detail or to offer the kind of cooperation that might alleviate the legitimate concerns of the world community, the Soviet Union and its friends make it essential that verification and compliance with arms control treaties be made a central feature of future arms control negotiations. The United States strongly believes that arms control and disarmament cannot achieve their full potential as programs of peace until nations agree on the principle of far-reaching international cooperation on monitoring and enforcing compliance with agreements.

In the area of chemical weapons arms control negotiations, it is no secret that the views of the United States and the Soviet Union diverge widely on the matter of verifying compliance. President Reagan has reaffirmed United States support for efforts to achieve a complete and verifiable ban on chemical weapons, and the President has directed United States representatives to participate actively in the Committee on Disarmament toward elaboration of a convention banning chemical weapons. The United States will urge the Committee on Disarmament to devote particular attention to verification and compliance issues, from both a technical and political standpoint.

TITAN RETIREMENTS

Senator WARNER. Mr. Secretary, there has been concern expressed by members of the Senate that we are unilaterally reducing our strategic nuclear strength—without getting anything from the Soviets for doing so—by retiring the Titan missile force. On the other hand, there has been considerable concern expressed about the safety and cost-effectiveness of these systems.

Would you address yourself to these two points of view and describe the administration's justification for retiring the Titan II's.

Answer. The decision to retire the Titan II missiles was a difficult one. While we recognize the disadvantages in unilaterally retiring a strategic system, the Air Force is committed to strategic force modernization. The savings associated with Titan II retirement (currently projected at nearly \$500 million through fiscal year 1987) will partially offset the costs of developing and fielding newer, more cost-effective systems designed to end the decline in U.S. strategic capability vis-a-vis the Soviet Union.

The Air Force has implemented numerous improvements to increase the margin of safety. Safety will continue to be of paramount concern throughout the deactivation program.

TRIDENT II ACCELERATION

Senator WARNER. Mr. Secretary, I understand that some consideration is being given to accelerating the Trident II Missile R. & D. program with an eye toward achieving an earlier initial operational capability for that system.

Is that the case? What is the new IOC being aimed for? What trade-off's appear to be necessary to achieve that earlier IOC (eg. reduction in missile performance, accuracy, etc.)? And what additional cost—over and above that anticipated for the 1989 IOC previously projected—is involved?

Answer. Acceleration of the Trident-II (D-5) missile IOC is presently under active study by the Navy, both by its technical community and by the Navy Research Advisory Council (NRAC). The technical and economic feasibility of acceleration of up to two years is being examined. Specific analyses of the trade-offs involved and quantitative estimates of costs of an accelerated program relative to the currently planned program will not be available until the initial studies are completed in March 1982.

B-1 REPROGRAMING

Senator WARNER. The President recently certified that the B-1B bomber program would be procured at a cost of \$20.5 billion for 100 aircraft with an initial operational capability of 1986. In so doing, he stated an important caveat: That the accom-

plishment of this ambitious program was contingent upon Congressional support and timely action on funding requests.

In point of fact, Congress has already placed an impediment in the B-1's way: the fiscal year 1982 defense appropriation bill cut the requested funding for the bomber's research and development by \$179.1. You have now sought to restore those funds by reprogramming from the procurement account.

How important is it to the realization of the goals laid out by the President that you get the swift approval of that reprogramming request from the four relevant committees of the Congress? What will happen to the program if you should not?

Answer. The 1982 defense appropriations bill appropriated \$330.1 million below the DOD request for the B-1B strategic bomber program. As you noted, much of the reduction was in front-end R.D.T. & E. funding which is crucial to realize a timely and cost-effective transition from systems development and integration into production.

At this critical juncture in the B-1B program, maintaining the 1986 IOC and preserving the \$20.5 billion (in fiscal year 1981 dollars) budget for the B-1B are totally dependent on the prompt approval of the B-1B reprogramming request. The President, in his B-1B certification letter, reemphasized the point that funding delays and/or reductions in the B-1B program budget will increase schedule and cost risks.

Without expeditious action, the insufficient R.D.T. & E. funds currently approved by the Congress for fiscal year 1982 will require an immediate restructuring of the B-1B program and renegotiation of our fixed price contracts. As a result, the B-1B IOC could slip 6 to 9 months into 1987 and the total program acquisition cost \$20.5 billion (in fiscal year 1981 dollars) would be exceeded.

AFFORDABILITY OF STRATEGIC MODERNIZATION

Senator WARNER. Mr. Secretary, last year, those of us who supported the President's strategic force modernization program were accused of doing so at the expense of making needed improvements to our conventional forces.

Would you discuss for the committee the balance and synergism that you see existing in the fiscal year 1983 program's investment in strategic and nonnuclear systems?

Answer. This administration fully appreciates and supports the need for a proper balance between the modernization of our nuclear and conventional forces, a need generated by the too long neglect of our defense capabilities. The fiscal year 1983 budget submission, and its predecessor, the fiscal year 1982 budget, does represent such a balance. As we noted last year, the direct costs of the President's strategic modernization program will require less than 15 percent of the Defense budget over the 5-Year Defense Plan. Thus, the strategic modernization program is far from being a major portion of the Defense budget and we have structured this program to achieve our overriding goals of security and survival at minimum cost. Similarly we have begun the long process of modernizing our conventional forces and of increasing their readiness and sustainability. Clearly, decades of neglect cannot be overcome overnight, especially since we are all committed to realize this objective in the most efficient and cost effective manner. But the Congressional support of the fiscal year 1982 DOD budget began the vital rebuilding of our conventional capability and we strongly urge your continued support in fiscal year 1983 to sustain this process.

CARLUCCI PROCUREMENT INITIATIVES

Senator WARNER. Mr. Secretary, you have mentioned the fact that you have already begun to see some of the fruits of the procurement reforms you instituted upon taking office, which have come to be known, I believe, as the Carlucci Initiatives. You are to be congratulated for your efforts in this difficult area.

I have some concern that draft legislation put forward by the Office of Federal Procurement Policy that would require a uniform procurement code for all agencies of the Federal Government, might hamper or undo some of your work in the area of streamlined DOD procurement, would you comment?

Answer. We have not yet seen the final revision to the Office of Federal Procurement Policy's draft proposal for a Uniform Federal Procurement System. Until we are able to review this document, we are unsure of the impact it may have on our efforts to streamline DOD procurement. The Department has no objections to a procurement system that provides for, to the extent practicable, uniform Government-wide procurement policy. However, I also believe that DOD would be unable to meet its unique mission responsibilities of providing for the national defense and, in conjunction therewith, of supplying goods and services to our Armed Forces without a procurement code that recognizes our unique needs, our unencumbered authority to

issue regulations, and the need to effectively manage decentralized procurement operations manned by a composite civilian/military force.

ATB FUNDING

Senator WARNER. Mr. Secretary, as you know, in our action on the fiscal year 1982 defense appropriations bill, the Senate adopted an amendment offered by Senator Jackson and cosponsored by several members of this committee that directed that no funds should be redirected from the amount appropriated by the Congress for the Advanced Technology Bomber.

Recognizing the sensitivity of this important, highly-classified program, will you give the committee your assurance that, in fact, both the letter and the spirit of that language are being adhered to by the Department of Defense?

Answer. Yes, the Jackson amendment stated that "of the funds appropriated by this act for strategic programs, the Secretary of Defense shall provide funds for the Advanced Technology Bomber program at a level at least equal to the amount provided by the committee of conference on this Act in order to maintain priority emphasis on this program." I will insure that funds provided for the Advanced Technology Bomber will not be redirected without the prior approval of the Congress. However, as you are aware, the Appropriations Act contained a higher level of funding for the ATB than the Authorizations Act. I am aware that the committees are attempting to resolve this discrepancy and again I assure you that we will comply with the letter and spirit of the Congress.

QUESTIONS SUBMITTED BY SENATOR WILLIAM S. COHEN

SOLE-SOURCE CONTRACTING

Senator COHEN. Mr. Carlucci, one of the problems with our present procurement statutes is that noncompetitive contracting is so easily justified.

For example, the current law provides an exception to formal advertising which allows noncompetitive negotiation in situations where a contracting official determines it is "impractical" to secure competition. This exception is broad and particularly easy to invoke.

In fact, when the Governmental Affairs Oversight Subcommittee investigated year-end spending by Federal agencies, we found that an agency's need to award a contract by the end of the fiscal year often became the motivation behind unnecessarily restrictive specifications that made competition "impracticable" and warranted going sole-source.

Do you believe that changes in the current law and regulations are needed to tighten the language that is now used to justify sole-source contracts?

Answer. No, I do not believe that changes in the current law and regulations are needed to tighten the language that is now used to justify sole-source contracts.

The congressional mandate for competition is amply covered in the Armed Services Procurement Act of 1947 and other statutes. This mandate is implemented in the Defense Acquisition Regulation (DAR). Although procurements may be effected by negotiation rather than formal advertising under any of the 17 exceptions cited in the Act, the DAR provides that, except for procurements of utility services and procurements of educational services from nonprofit institutions, contracts in excess of \$25,000 shall not be negotiated on a noncompetitive basis without prior review at a level higher than the contracting officer. These reviews are performed by various levels of supervisors and/or various types of review boards depending on the dollar values of the proposed procurements.

As for year-end spending, we do not have the problem that other Federal agencies may have. The annual Appropriation Act for DCD since fiscal year 1953 has provided that no more than 20 percent of the appropriations which are limited for obligation during the fiscal year (annual appropriations as differentiated from multiyear or no-year funds) shall be obligated during the last 2 months. We have always been in compliance with this provision.

RESTRICTION ON SOLE-SOURCE CONTRACTING

Senator COHEN. Secretary Carlucci, I plan to introduce legislation which would expand the use of competition in Federal procurement and would impose greater restrictions on the awarding of noncompetitive contracts in both DOD and in the civilian agencies.

As you know, under the Armed Services Procurement Act, formal advertising is the preferred method of procurement, with negotiation authorized by prescribed exceptions. Despite this emphasis on competition through formal advertising, however, negotiated contracts account for the vast majority of Defense procurement contracts. Of these negotiated contracts, more than half are sole-sourced.

Recognizing that negotiation has become the rule, my legislation would impose greater restrictions on the awarding of sole-source contracts by shifting the emphasis from having to justify negotiation to having to justify noncompetitive procurements.

I believe that my approach to expanding competition in Government contracting offers several advantages. First, it recognizes that competition takes more than one form, and, second, it permits sole-source contracts to be awarded only when they are truly warranted.

Do you believe that such an approach would encourage more competition in DOD contracting?

Answer. No. I do not believe that such an approach would encourage more competition in DOD contracting.

Based on a statutory requirement for formal advertising and competitive negotiation, we now require full justification and review above the contracting officer for all proposed sole-source awards over \$25,000, except for those for utility services and those for educational services from nonprofit institutions. Thus, sole-source awards are to be awarded only when they are truly warranted. I do not believe that legislation, such as you propose, would result in better controls over noncompetitive procurements.

It must be recognized that competition is not always possible or cost effective. Other firms may not have the technical data, know-how, or facilities to produce the desired item. To obtain these items from any other firms could be expensive, often prohibitively so. Consideration of all elements leading to a decision to compete or not to compete would be little affected by any proposed legislative requirements.

QUESTIONS SUBMITTED BY SENATOR ROGER W. JEPSEN

MANPOWER SHORTFALL

Senator JEPSEN. One of the most serious problems we are currently facing in strengthening the Reserve Component of the Total Force is the chronic shortage of personnel in the Individual Ready Reserve and the Inactive National Guard. What initiatives is the Department of Defense proposing to correct the serious manpower shortfall?

Mr. CARLUCCI. A long-term solution to the shortages of pretrained individuals would be to increase the length of the military service obligation which is currently 6 years. A proposal being considered within DOD would increase this obligation up to 8 years. The amount of time served on active duty or in the Selected Reserve would not be affected but the time served in the IRR before normal discharge would be extended. This change would produce the manpower needed, however, it would take 6 years before any strength gains were obtained. During the interim period, the use of other initiatives and incentives are necessary to generate strength increases.

An enhanced IRR reenlistment bonus program appears to possess the greatest potential for significantly increasing IRR strength. A proposal is being developed that would reinstate and improve the IRR reenlistment bonus that was tested during fiscal year 1981. This bonus provides an incentive for personnel to continue to serve in the IRR who may otherwise elect discharge.

Another initiative is the direct enlistment option that the Army will begin in fiscal year 1983. This program will provide for individuals to join the Army, attend initial training, opt for service on active duty or in the Selected Reserve, or return to the IRR to complete their military service obligation. A modest enlistment bonus for this program is proposed. Extended IRR service would require some refresher training periodically for skills to remain proficient.

A plan currently being considered would open eligibility for Servicemen's Group Life Insurance (SGLI) to members of the IRR. These members of the Ready Reserve are subject to recall during a national emergency but are presently excluded from participation in this program. Since premiums would be paid by the individual concerned, it would be essentially a no-cost program to the government.

This integrated program would resolve the mobilization manpower shortages by the late 1980's primarily through the use of an extended service obligation. Bonus

programs and group life insurance for the IRR would assist in reducing the shortfall during the interim period.

GI BILL

Senator JEPSEN. Does the Department of Defense strongly support a renewed form of GI bill? Why?

Answer. The Department is in its final stages of preparing a program of educational benefits for military personnel for the Congress. Different types and levels of benefits are under consideration by each of the Services. The fiscal year 1981 Educational Assistance Test Program demonstrated that educational benefits can increase the number of high quality recruits for all of the services. Any new education program, however, must be balanced between the need for a strong and capable defense and the constraints of the Federal budget.

Senator JEPSEN. Does the Department of Defense consider "Grandfathering" of those service members who are not covered under a GI bill to be cost effective? How high would the projected costs of "grandfathering" those members be?

Answer. A provision to "grandfather" those military members not currently covered by the GI bill, that is, those members who entered the force after 1 January 1977, would cost at least \$1 billion (nonindexed). To give pre-1977 members the options to elect a new program would cost at least another \$1 billion (nonindexed). This cost depends on specific provisions such as benefit levels, transfer options, indexing, etc. Such a provision must be viewed in the context of a comprehensive education package such as we are now reviewing.

PRODUCTION RISK

Senator JEPSEN. You have laid great stress on the need to budget for technological uncertainty in your statement. A recent study by the GAO, dated October 20, 1981, pointed out that costs of several recent Army programs have risen dramatically after the systems entered production. This resulted in the case of the UH-60 Blackhawk, for example, from an optimistic learning curve which failed to materialize.

What specific initiatives is the Department of Defense taking to budget for production uncertainty in new programs?

Answer. As one of the acquisition initiatives, budgeting will be done to most likely cost in which a number of variables including learning curves are considered. In order to reduce the uncertainty before the fact, Production Readiness Reviews are performed on systems prior to their release for production. These reviews include manufacturing engineering considerations and are intended specifically to identify production uncertainties and risks.

MILITARY PAY RAISES

Senator JEPSEN. What plans does the Department of Defense have for a new pay adjustment mechanism in view of the recent improvements in recruiting and retention of military personnel?

Answer. We have not arrived at a final DOD position on a new military pay adjustment mechanism other than the fact that we know we want to delink military pay raises from General Schedule salary increases, as is the case under current law. We are approaching the issue on two fronts. The Military Manpower Task Force is concerned with establishing overall policy on military pay raises, e.g. whether the link should be to PATC or some other index, the degree of reallocation authority, etc. At the same time, a joint Services study group is working on the technical aspects of developing and implementing a revised military pay raise index. A final DOD decision will be made shortly.

Senator JEPSEN. Do you consider it cost effective to give an 18-year-old, who is now eligible for \$600 per month in base pay and an \$8,000 enlistment bonus, an 8 percent pay raise?

Answer. First, to put the pay of a recruit in perspective, his actual basic pay is \$551.40 per month, not \$600. Further, even though we have authority to pay an enlistment bonus of up to \$8,000, the maximum bonus we plan to pay in fiscal year 1982 is \$5,000 and the average bonus will be \$3,800. Additionally, a relatively small percentage of enlistees get any enlistment bonus. In fiscal year 1982, the following percentage of enlistees will receive an enlistment bonus: Army, 18 percent; Navy, 12 percent; Marine Corps, 10 percent; and Air Force, 2 percent. Regarding the planned 8 percent military pay raise in October, we have not yet determined whether or not there is a need to allocate it by grade and years of service.

QUESTIONS SUBMITTED BY SENATOR JOHN C. STENNIS

5-YEAR DEFENSE PROGRAM

Senator STENNIS. Mr. Carlucci, on page 30 of Senate Report No. 97-58 is a table entitled "Summary of Active Military Forces." Please provide for the record, for each entry for forces (not inventories) on the table, Department of Defense projections for the end of each year of the fiscal year 1983-fiscal year 1987 5-Year Defense Program.

ARMY

Answer. Under General Purpose Forces, the Army Active divisions will remain at 16 for the period fiscal year 1983-87; the projection for the table on page 30 will therefore read:

GENERAL PURPOSE FORCES

	Fiscal year—				
	1983	1984	1985	1986	1987
Land forces:					
Army divisions.....	16	16	16	16	16
Combat brigades.....	50	50	50	50	50

NAVY PROJECTIONS

[Numbers only]

	Fiscal year—				
	1983	1984	1985	1986	1987
Strategic Forces:					
Polaris/Poseidon/Trident missiles.....					
General purpose forces: ¹					
Navy attack air wings.....	13	13	13	13	14
Attack carriers ²	13	13	12	13	³ 14
Attack submarines.....	99	105	103	102	100
Naval combatants.....	213	217	223	232	236
Amphibious ships.....	60	59	60	60	60
Auxiliaries.....	81	80	80	78	75

¹ All active ship forces with the exception of SSBN's are considered general purpose forces.

² Inventory does not include U.S.S. "Lexington" (AVT-16) nor ship in SLEP at year-end.

³ Assumes CVN-71 delivered in 1986 under accelerated schedule. Without CVN-71: Inventory=13 CV/CVN.

ACTIVE MILITARY FORCES

Senator STENNIS. Mr. Carlucci, on page 30 of Senate Report No. 97-58 is a table entitled Summary of Active Military Forces. Please provide for the record, for each entry for forces (not inventories) on the table, Department of Defense projections for the end of each year of the fiscal year 1983-fiscal year 1987 Five Year Defense Program.

Answer. See Attached Table.

	Actual		Estimated		[Deleted]
	Sept. 30, 1980 ¹	Sept. 30, 1981	Sept. 30, 1982	Sept. 30, 1983	
Strategic Forces—ICBM's:					
Minuteman		1,000	1,000	1,000	[Deleted]
Titan II		53	53	47	[Deleted]
Strategic bomber SQ		25	25	22	[Deleted]
Aircraft (PAA)		376	376	330	[Deleted]
Manned fighter					[Deleted]
Interceptor SQ		5	5	5	[Deleted]
General Purpose Forces—Tactical Air Forces:					
Air Force Wings ^a	23	23	24	25	[Deleted]
Aircraft (PAA)		1,686	1,728	1,812	[Deleted]
Airlift and Sealift Forces:					
Strategic Airlift SQ:					
C-5A/B SQ		4	4	4	[Deleted]
Aircraft (PAA)		70	70	70	[Deleted]
C-141 SQ		13	13	13	[Deleted]
Aircraft (PAA)		234	234	234	[Deleted]
Tactical Airlift SQ:					
C-130 SQ		14	14	14	[Deleted]
Aircraft (PAA)		218	218	218	[Deleted]
Equipment inventories: Total Air Force aircraft		7,092	7,194	7,305	[Deleted]

¹ Only changes for 1980 are shown.

² Wing equivalents rounded to nearest whole number.

ARMY COMBAT BATTALIONS

Senator STENNIS. Mr. Carlucci, please provide for the record the number of Army combat battalions that were in, or are projected to be in, the active-duty force on the dates shown in the table on page 30 of Senate Report No. 97-58. Also, please provide a projection of active-duty Army combat battalions for the end of each year of the fiscal year 1983-fiscal year 1987 5-Year Defense Program.

Answer. The number of Army combat battalions that were in or are projected to be in the active-duty forces on the dates indicated are as follows: 1964—212, 1980—188, 1981—187, 1982—189, 1983—189, 1984—189, 1985—189, 1986—191, 1987—191. These figures include all AC maneuver battalions and armored cavalry squadrons.

TOTAL NAVY SHIPS AND AIRCRAFT

Senator STENNIS. Mr. Carlucci, for each of the four items of inventory data in the table on page 30 of the Senate Report No. 97-58, please provide for the record the average age of the inventories as of the four dates shown in the table. Also, please provide for the record a projection of the quantities and average age of the inventories for the four items of inventory data shown for the end of each year of the fiscal year 1983 to fiscal year 1987 5-Year Defense Program.

Mr. CARLUCCI. The information is provided below:

AVERAGE AGE

	June 1964	September 1980	September 1981	September 1982
Navy fleet	15.2	14.3	14.7	14.7
Navy aircraft	6.5	10.9	11.4	12.0

PROJECTED QUANTITIES/AVERAGE AGE

	September 1983	September 1984	September 1985	September 1986	September 1987
Navy fleet.....	500/15.1	509/51.5	515/15.9	523/16.3	524/16.4
Navy A/C.....	5,606/12.5	5,650/12.9	5,702/13.4	5,683/13.4	5,809/13.5

AIR FORCE

	Actual			Estimated		
	June 30, 1964	Sept. 30, 1980	Sept. 30, 1981	Sept. 30, 1982	Sept. 30, 1983	[Deleted]
Equipment inventories: Total Air Force ACFT average age.....	¹ 7.8	12.7	13.1	13.5	13.9	[Deleted]

¹ Includes inactive aircraft for 1964 only.

	Estimated		
	Sept. 30, 1983		
	TAI	Average age ¹	(Deleted)
Strategic forces:			
Bombers.....	363	21.6	[Deleted]
Tankers.....	533	21.8	[Deleted]
ICBM's.....	1,206	12.7	[Deleted]
ALCM's.....	685	.8	[Deleted]
General purpose forces:			
Attack aircraft ²	492	4.0	[Deleted]
Fighter/interceptors.....	2,534	8.6	[Deleted]
Strategic airlift.....	347	16.0	[Deleted]
Tactical airlift.....	255	15.5	[Deleted]

¹ Active Force only. Inclusion of Air Reserve Forces aircraft would increase average age.² Division of forces is by attack in one division and fighter/interceptors in another.

	Actual				Estimated			
	June 30, 1964		Sept. 30, 1980		Sept. 30, 1981		Sept. 30, 1982	
	TAI	Average age ¹	TAI	Average age ¹	TAI	Average age ¹	TAI	Average age ¹
Strategic forces:								
Bombers.....	1,509	7.7	414	19.1	412	20.1	411	21.1
Tankers.....	998	6.1	518	19.4	523	20.2	528	21.0
ICBM's.....	947	1.4	1,237	9.7	1,233	10.7	1,217	11.7
ALCM's.....					19	.4	205	.6
General purpose forces:								
Attack aircraft ²			409	3.4	408	2.8	475	3.2
Fighter/interceptors.....	³ 3,538	5.5	2,360	8.9	2,442	8.7	2,450	8.5
Strategic airlift.....	⁴ 2,580	11.9	348	13.0	348	14.0	348	15.0
Tactical airlift.....			267	12.1	259	13.4	256	14.5

¹ Active Force only. Inclusion of Air Reserve Forces aircraft would increase average age.² Division of forces is by attack in one division and fighter/interceptors in another.³ 1964 number includes attack, fighters, and interceptors aircraft.⁴ 1964 number includes all cargo type aircraft.

AIR NATIONAL GUARD

	Actual						Estimated	
	June 30, 1964		Sept. 30, 1980		Sept. 30, 1981		Sept. 30, 1982	
	TAI	Average age ¹	TAI	Average age ¹	TAI	Average age ¹	TAI	Average age ¹
Strategic forces: Tankers	62	10.2	104	21.6	104	22.6	104	23.6
General purposes forces:								
Attack aircraft ²			357	6.5	450	7.2	464	7.8
Fighter/interceptors ³	1,056	8.9	496	17.3	495	17.6	536	18.1
Tactical airlift ⁴	285	12.3	214	19.8	214	20.4	215	21.8
Total ANG	1,810	9.4	1,560	14.8	1,636	15.0	1,665	15.5

¹ Active Force only. Inclusion of Air Reserve Forces aircraft would increase average age.² Division of forces is by attack in one division and fighter/interceptors in another.³ 1964 number includes attack, fighters, and interceptors aircraft.⁴ 1964 number includes all cargo type aircraft.

AIR FORCE RESERVE

	Actual						Estimated	
	June 30, 1964		Sept. 30, 1980		Sept. 30, 1981		Sept. 30, 1982	
	TAI	Average age ¹	TAI	Average age ¹	TAI	Average age ¹	TAI	Average age ¹
Strategic forces: Tankers	0	0	24	21.5	24	22.5	24	23.5
General purpose forces:								
Attack aircraft ²			96	8.8	85	6.2	76	5.6
Fighter/interceptors	0	0	95	17.2	111	16.7	138	16.4
Tactical airlift ³	664	11.4	210	20.3	186	21.2	173	22.1
Total AFR	722	11.6	474	16.7	452	16.5	455	16.9

¹ Active Force only. Inclusion of Air Reserve Forces aircraft would increase average age.² Division of forces is by attack in one division and fighter/interceptors in another.³ 1964 number includes all cargo type aircraft.

Total force

June 30, 1964:	
TAI	16,814
Average age	8.1
Sept. 30, 1980:	
TAI	9,068
Average age	13.3
Sept. 30, 1981:	
TAI	9,180
Average age	13.6
Sept. 30, 1982:	
TAI	9,314
Average age	14.0

NUMBER OF TOTAL ACTIVE INVENTORY (TAI) PLUS AVERAGE

Senator STENNIS. Mr. Carlucci, please provide for the record the number of weapons of the total active inventory (TAI), and the average age of the inventory, for each date in the table on page 30 of Senate Report 97-58, for the following weapon types:

Mr. CARLUCCI. The information is provided below:

TOTAL ACTIVE INVENTORY AND AVERAGE AGE

	June 20, 1964		September 30, 1980		September 30, 1981		September 30, 1982	
	Inventory	Avg. age	Inventory	Avg. age	Inventory	Avg. age	Inventory	Avg. age
Strategic:								
Ballistic Missile submarines	21	1.8	40	16.5	34	17.1	33	16.6

TOTAL ACTIVE INVENTORY AND AVERAGE AGE—Continued

	June 20, 1964		September 30, 1960		September 30, 1981		September 30, 1982	
	Inventory	Avg. age	Inventory	Avg. age	Inventory	Avg. age	Inventory	Avg. age
Sea-launched ballistic missiles.....	[Deleted]							
General purpose forces: ¹								
Attack Helo.....	0	0	99	5.4	101	6.5	100	7.6
Attack carriers.....	24	15.2	13	19.7	12	20.3	13	19.7
Naval combatants.....	385	14.4	184	12.3	192	12.6	203	12.6
Attack subs.....	104	15.0	79	12.3	87	13.0	96	13.4
Amphibious ships.....	133	16.2	63	12.4	59	13.5	59	14.5
Auxiliaries.....	250	19.1	77	20.9	80	20.7	81	20.1
Attack and fighter A/C.....	2,597	4.5	2,013	9.8	2,083	10.2	2,090	10.8
Tact. nuc. wpns. ²	[Deleted]							

¹ All active ship forces with exception of SSBN's are considered to be general purpose forces.² CVA/CVAN fitted with integral antisubmarine warfare capability reclassified as multipurpose aircraft carriers (CV/CVN) in 1972 as dedicated ASW carriers were phased out. By 1975, all CV's were retired and all active carriers classified CV or CVN.³ Includes the following missile types: TALOS, Terrier, Standard, ASROC, and SUBROC.

AIR FORCE

	Actual						Estimated	
	June 30, 1964		Sept. 30, 1980		Sept. 30, 1981		Sept. 30, 1982	
	TAI	Average age ¹	TAI	Average age ¹	TAI	Average age ¹	TAI	Average age ¹
Strategic forces:								
Bombers.....	1,509	7.7	414	19.1	412	20.1	411	21.1
Tankers.....	998	6.1	518	19.4	523	20.2	528	21.0
ICBM's.....	947	1.4	1,237	9.7	1,233	10.7	1,217	11.7
ALCM's.....					19	4	205	6
General purpose forces:								
Attack aircraft ²			409	3.4	408	2.8	475	3.2
Fighter/interceptors.....	3,538	5.5	2,360	8.9	2,442	9.7	2,456	8.5
Strategic airlift.....	2,580	11.9	348	13.0	346	14.0	348	15.0
Tactical airlift.....			267	12.1	259	13.4	256	14.5

¹ Active force only. Inclusion of Air Reserve Forces aircraft would increase average age.² Division of forces is by attack in one division and fighter/interceptors in another.³ 1964 number includes attack, fighters, and interceptors aircraft.⁴ 1964 number includes all cargo type aircraft.

AIR NATIONAL GUARD

	Actual						Estimated	
	June 30, 1964		Sept. 30, 1980		Sept. 30, 1981		Sept. 30, 1982	
	TAI	Average age ¹	TAI	Average age ¹	TAI	Average age ¹	TAI	Average age ¹
Strategic forces: Tankers.....	62	10.2	104	21.6	104	22.6	104	23.6
General purpose forces:								
Attack aircraft ²			357	6.5	450	7.2	464	7.8
Fighter/interceptors ³	1,056	8.9	496	17.3	495	17.6	536	18.1
Tactical airlift ⁴	285	12.3	214	19.8	214	20.4	215	21.8
Total ANG.....	1,810	9.4	1,560	14.8	1,636	15.0	1,665	15.5

¹ Active Force only. Inclusion of Air Reserve Forces aircraft would increase average age.² Division of forces is by attack in one division and fighter/interceptors in another.³ 1964 number includes attack, fighters, and interceptors aircraft.⁴ 1964 number includes all cargo type aircraft.

AIR FORCE RESERVE

	Actual						Estimated	
	June 30, 1964		Sept. 30, 1980		Sept. 30, 1981		Sept. 30, 1982	
	TAI	Average age ¹	TAI	Average age ¹	TAI	Average age ¹	TAI	Average age ¹
Strategic forces: Tankers	0	0	24	21.5	24	22.5	24	23.5
General purpose forces:								
Attack aircraft ²			96	8.8	85	6.2	76	5.6
Fighter interceptors	0	0	95	17.2	111	16.7	138	16.4
Tactical airlift ³	664	11.4	210	20.3	186	21.2	173	22.1
Total AFR	772	11.6	474	16.7	452	16.5	455	16.9

¹ Active Force only. Inclusion of Air Reserve Forces aircraft would increase average age.

² Division of forces is by attack in one division and fighter/interceptors in another.

³ 1964 number includes all cargo type aircraft.

Total force

June 30, 1964:	
TAI	16,814
Average age	8.1
Sept. 30, 1980:	
TAI	9,068
Average age	13.3
Sept. 30, 1981:	
TAI	9,180
Average age	13.6
Sept. 30, 1982:	
TAI	9,314
Average age	14.0

Senator STENNIS. Also, please provide for the record a projection of these total active inventories (TAI) and average ages for the end of each year of the 5-Year Defense Program for fiscal year 1983 to fiscal year 1987.

Mr. CARLUCCI. The information is provided below:

TOTAL ACTIVE INVENTORY AND AVERAGE AGE

	Fiscal year									
	1983		1984		1985		1986		1987	
	(¹)	(²)	(¹)	(²)	(¹)	(²)	(¹)	(²)	(¹)	(²)
Strategic:										
Ballistic missile submarines	34	17.1	35	17.6	37	17.6	38	18.2	39	18.7
Sea-launched ballistic missiles					[Deleted.]					
General purpose forces: ³										
Attack Helos	100	8.7	99	9.7	98	10.7	117	8.5	125	6.2
Attack carriers ⁴	13	20.6	13	21.6	12	21.6	13	23.9	⁵ 14	23.4
Naval combatants	215	13	217	13.2	223	13.9	232	14.3	236	14.6
Attack subs	99	13.8	105	13.9	103	14.2	102	14.8	100	15.1
Amphibious ships	60	15.5	59	16.3	60	17.0	60	17.5	60	17.9
Auxiliaries	81	20.4	80	21.2	80	21.3	78	20.8	75	20.3
Attack and fighter A/C	2,086	11.1	2,114	11.6	2,140	12.0	2,138	12.1	2,227	12.0
Tact. nuc. wpns. ⁶					[Deleted.]					

¹ Inventory.

² Average age.

³ All active ship forces with exception of SSBN's are considered to be general purpose forces.

⁴ Inventory does not include U.S.S. "Lexington" (AVT-16) nor ship in SLEP at end of year.

⁵ Assumes CVN-71 div'd in 1986 under accelerated schedule. Without CVN-71: Inventory=13/25.1.

⁶ Includes following missile types: Terrier, Standard, ASROC, SUBROC, and Tomahawk.

AIR FORCE

	Actual			Estimated		[Deleted]
	June 30, 1964	Sept. 30, 1980	Sept. 30, 1981	Sept. 30, 1982	Sept. 30, 1983	
Equipment inventories: Total Air Force ACFT average age.....	¹ 7.8	12.7	13.1	13.5	13.9	[Deleted]

¹ Includes inactive aircraft for 1964 only.

	Estimated		
	Sept. 30, 1983		
	TAI	Average age ¹	[Deleted]
Strategic forces:			
Bombers.....	363	21.6	[Deleted]
Tankers.....	533	21.8	[Deleted]
ICBM's.....	1,206	12.7	[Deleted]
ALCM's.....	685	.8	[Deleted]
General purpose forces:			
Attack aircraft ²	492	4.0	[Deleted]
Fighter/interceptors.....	2,534	8.6	[Deleted]
Strategic airlift.....	347	16.0	[Deleted]
Tactical airlift.....	255	15.5	[Deleted]

¹ Active Force only. Inclusion of Air Reserve Forces aircraft would increase average age.

² Division of forces is by attack in one division and fighter/interceptors in another.

	Actual							
	June 30, 1964		Sept. 30, 1980		Sept. 30, 1981		Sept. 30, 1982	
	TAI	Average age ¹	TAI	Average age ¹	TAI	Average age ¹	TAI	Average age ¹
Strategic forces:								
Bombers.....	1,509	7.7	414	19.1	412	20.1	411	21.1
Tankers.....	998	6.1	518	19.4	523	20.2	528	21.0
ICBM's.....	947	1.4	1,237	9.7	1,233	10.7	1,217	11.7
ALCM's.....					19	.4	205	.6
General purpose forces:								
Attack aircraft ²			409	3.4	408	2.8	475	3.2
Fighter/interceptors.....	³ 3,538	5.5	2,360	8.9	2,442	8.7	2,450	8.5
Strategic airlift.....	⁴ 2,580	11.9	348	13.0	348	14.0	348	15.0
Tactical airlift.....			267	12.1	259	13.4	256	14.5

¹ Active Force only. Inclusion of Air Reserve Forces aircraft would increase average age.

² Division of forces is by attack in one division, and fighter/interceptors in another.

³ 1964 number includes attack, fighters, and interceptors aircraft.

⁴ 1964 number includes all cargo type aircraft.

AIR NATIONAL GUARD

	Actual						Estimated	
	June 30, 1964		Sept. 30, 1980		Sept. 30, 1981		Sept. 30, 1982	
	TAI	Average age ¹	TAI	Average age ¹	TAI	Average age ¹	TAI	Average age ¹
Strategic forces: Tankers	62	10.2	104	21.6	104	22.6	104	23.6
General purpose forces:								
Attack aircraft ²			357	6.5	450	7.2	464	7.8
Fighter/interceptors ³	1,056	8.9	496	17.3	495	17.6	536	18.1
Tactical airlift ⁴	285	12.3	214	19.8	214	20.4	215	21.8
Total ANG	1,810	9.4	1,560	14.8	1,636	15.0	1,665	15.5

¹ Active Force only. Inclusion of Air Reserve Forces aircraft would increase average age.

² Division of forces is by attack in one division and fighter/interceptors in another.

³ 1964 number includes attack, fighters, and interceptors aircraft.

⁴ 1964 number includes all cargo type aircraft.

AIR FORCE RESERVE

	Actual						Estimated	
	June 30, 1964		Sept. 30, 1980		Sept. 30, 1981		Sept. 30, 1982	
	TAI	Average age ¹	TAI	Average age ¹	TAI	Average age ¹	TAI	Average age ¹
Strategic forces: Tankers	0	0	24	21.5	24	22.5	24	23.5
General purposes forces:								
Attack aircraft ²			96	8.8	85	6.2	76	5.6
Fighter/interceptors	0	0	95	17.2	111	16.7	138	16.4
Tactical airlift ³	664	11.4	210	20.3	186	21.2	173	22.1
Total AFR	722	11.6	474	16.7	452	16.5	455	16.9

¹ Active Force only. Inclusion of Air Reserve Forces aircraft would increase average age.

² Division of forces is by attack in one division and fighter/interceptors in another.

³ 1964 number includes all cargo type aircraft.

Total force

June 30, 1964:	
TAI	16,814
Average age	8.1
Sept. 30, 1980:	
TAI	9,068
Average age	13.3
Sept. 30, 1981:	
TAI	9,180
Average age	13.6
Sept. 30, 1982:	
TAI	9,314
Average age	14.0

Senator STENNIS. What is the equipment asset posture/projected asset posture for end of fiscal year 1964 and fiscal year 1980-87?

Mr. CARLUCCI. The average assets for projected assets on-hand with the average age of the fleet are: See inclosure.

	Fiscal year—								
	1964	1980	1981	1982	1983	1984	1985	1986	1987
Tanks:									
Quantity	4,925	10,987	10,773	11,305	12,151	12,887	13,847	14,927	15,106
Age (years)	9.5	7.5	8.2	8.3	8.8	9.3	9.8	10.2	9.4
Attack helicopters:									
Quantity	0	733	754	899	969	976	1,036	1,134	1,263
Age (years)		9.5	10.3	10.9	11.9	12.8	13.5	14.4	14.9

	Fiscal year—								
	1964	1980	1981	1982	1983	1984	1985	1986	1987
Fighting vehicles/APC's:									
Quantity	8,142	11,399	12,336	12,228	12,406	13,095	13,433	13,711	14,622
Age (years)	1.3	10.3	10.5	11.3	11.8	12.1	12.2	12.7	12.9

QUESTIONS SUBMITTED BY SENATOR J. JAMES EXON

Senator EXON. On page 4 of your statement, you mentioned the deletion or restructuring of some 60 existing and "new start" programs of lower priority for a savings of \$1.2 billion in fiscal year 1983 and \$7 billion during the 5-year program. What are these programs?

Answer. The table showing the 60 specific items I was referring to in my statement was supplied to question submitted by Senator Thurmond. See page 587.

Senator EXON. With regard to your Defense Contractor Capital Investment program—when DOD provides increased milestone billing, more advanced funding, expedition of contract payment schedules and "profit levels more commensurate with risk"—what measures will the Department take to ensure that DOD is not overcharged, resulting in the complicated and costly contractor/government claims problem we experienced in the 1970's?

Secretary CARLUCCI. First, we have not increased milestone billing nor do we intend to increase advanced funding. In fact, recent changes in our progress payment policy are intended to limit the need for increased use and frequency of milestone billings. In our noncompetitive negotiated contracts, an audit and technical analysis is performed, and we negotiate what we believe is a fair and reasonable price for contract performance. Competitive contracts are awarded either on technical capability, lowest overall cost, or both. In either case, the contracts are under constant surveillance by our contract administration people. In addition to the audit of the contractor's proposal, post award audits are performed periodically throughout the life of the contract.

INVESTMENT IN PLANT CAPACITY

Senator EXON. On page 10 of your statement, you mentioned three programs—the Productivity Investment Project, the Manufacturing Technology Program, and the Production Surge Capability Program—all aimed at providing defense contractors with additional funds to increase their productivity. With this high level of government investment in plant capacity in the private sector, where is the contractor risk? Isn't this an indirect way of subsidizing defense contractors to an unprecedented degree?

Answer. It is the basic policy of the Department of Defense to rely on the private sector except in instances where the private sector is unwilling or unable to make the necessary investments. With regard to investing in more productive capital equipment, contractors often complain that if they did invest in more modern equipment to cut costs, the Department of Defense would require a renegotiation of price down to actual costs during subsequent negotiations. Their claim is that the opportunity to recoup investment in modern equipment is jeopardized and they are, therefore, reluctant to make such investments. The intent and extent of government investment is being applied where the private sector will not assume the risk. Investment in Manufacturing Technology is viewed as "seed money" necessary to reduce both the technical and fiscal risk associated with follow-on "factory floor" applications. This has been proven to have a significant return on investment for the government on the order of 5 to 1 and we have given this program greater emphasis in the fiscal year 1983 budget and the out years. Our guidance is explicit in directing investment to those areas of greatest need and potential benefit. A fundamental objective of these investments is to increase the rate of infusion of new manufacturing technology and industrial equipment into the base. The Department of Defense recently developed a new concept of Technology Modernization (TechMod). It is a contracting strategy which attempts to incentivize contractors to invest in modern, productive capital equipment. The concept requires DOD and the contractor to negotiate at the onset whereby if the contractor does invest in capital in equipment, DOD agrees to a priority to share the benefits equitably in order to provide a financial incentive to help the contractor recover the cost of new equipment. The invest-

ments which are being pursued are directed to enhance productivity by applying new technology and improved processes and should not be confused with direct expenditures for added plant capacity for the private sector. These investments are intended as incentives for private capital investment which would ultimately increase production.

FISCAL YEAR 1982 SUPPLEMENTAL

Senator EXON. The fiscal year 1982 Supplemental Budget request is for \$2.3 billion. Last year, Secretary Weinberger pledged to come back to the Congress to request the funds to make the original 1982 budget request "whole" if DOD's inflation estimates were too low. I understand that last year's request was, indeed, \$2.3 billion too low and that is the genesis of the dollar amount of this supplemental request. However, the supplemental does not request \$2.3 billion for the same programs which were "short-changed" last year. There are included several "new starts"—for example, \$126 million for M-1 tank "surge" production capacity, two more KC-10 tanker aircraft and the ABRV warhead program. How can new programs be justified in the supplemental request and which of last year's "short changed" programs are not made "whole?"

Answer. Of the total \$2.3 billion requested in the fiscal year 1982 supplemental, \$1,323 million is a result of inflation, both direct and indirect, \$583 million is for programs for which oversight committees suggested supplemental or reprogramming actions be submitted, \$75 million is for transfers from other government agencies and \$333 million is to support new initiatives.

PAY SUPPLEMENTAL

Senator EXON. The normal practice is for the military and civilian pay raises to be included in each year's supplemental request. However, the fiscal year 1982 pay raise is not included in this supplemental. Instead, this request of \$5.4 billion has been held up by OMB and is scheduled to be submitted later this spring as a second supplemental. Would you explain the reason for this delay?

Answer. Our fiscal year 1982 pay supplemental will be submitted in accordance with the latest OMB guidance which directed all Federal agencies to request funding for all fiscal year 1982 Federal pay raises in the spring of 1982.

QUESTIONS SUBMITTED BY SENATOR CARL LEVIN

INFLATION RATES

Senator LEVIN. Mr. Carlucci, you place great emphasis in your statement on the awareness you and your team at the Pentagon have of what you term "our special responsibility to use wisely the resources provided to us." You declare: "We take seriously our obligation to present an 'honest budget'." You point to your management initiatives and your efforts to eliminate waste and make efficiencies and economies as reflective of your "honest budget" approach.

Frankly, I have serious questions about how "honest" this budget is based on an examination of the \$2.3 program supplemental for fiscal year 1982 which accompanies your request for fiscal year 1983.

Mr. Secretary, your press release accompanying the fiscal year 1983 Defense budget claims that, "Based on recorded inflation experience to date, adjustments are needed for fiscal year 1982". Some \$675 million in the supplemental addresses this inflation.

But, in the same press release, you indicate that you have lowered the inflation rate for industry purchases in fiscal year 1982 from the 8.4 percent level in last October's budget amendment to 8.3 percent.

Answer. Last November the U.S. Department of Commerce reported that actual fiscal year 1981 inflation for Defense purchases was 12.6 percent instead of 9.8 percent, which was used to price the Defense budget last July and September. This inflation margin adversely affected unexecuted Defense programs from several prior years. The dollar impact in fiscal year 1981 was calculated at \$2.2 billion and was a factor in the administration decision to submit the fiscal year 1982 supplemental.

The reduction in the inflation rate for industry purchases in fiscal year 1982 from 8.4 percent to 8.3 percent is the result of a very sharp reduction projected in fuel prices. The fiscal year 1982 fuel increase was projected at 7.2 percent in October but has now been adjusted downward to 1.2 percent. This leveling off in fuel prices is supported by first quarter actual data which show a price decline of 1.5 percent. The

lower fuel rates combine with higher rates for major procurement commodities (9.6 percent) and other non-fuel purchases (9.2 percent) to produce the 8.3 percent purchases composite in the press release. For the 90 percent of our industry purchases which do not involve direct fuel costs, the inflation assumptions for fiscal year 1982 are higher and not lower than the rates assumed last fall.

INFLATION

Senator LEVIN. Last October, you saved \$280 million in fiscal year 1982 by lowering the purchase inflation estimate from 8.7 percent to 8.4 percent. Your current purchase inflation estimate of 8.3 percent for fiscal year 1982 should save an additional \$80-\$90 million over the amount already appropriated for fiscal year 1982. How have these funds been applied in fiscal year 1982?

a. Because fiscal year 1983 inflation supposedly is lower, shouldn't we be reducing that budget by \$80-\$90 million instead of increasing it?

Answer. The fiscal year 1983 Budget as submitted by the Military Departments and Defense Agencies to the Office of the Secretary of Defense was priced at mid-session rates (July 1981). In the joint OMB-DOD budget review, the budget was re-priced using the administration's current economic projections. Some of the major procurement accounts were priced upwards but downward adjustments were made in fuel and non-major systems purchases. The fiscal year 1983 budget and the long range projections reflect the latest economic forecast by the administration and require no further pricing adjustments at this time.

Senator LEVIN. Let me turn now to three items you are proposing to add to the fiscal year 1982 budget through the supplemental.

You are proposing to add two KC-10A tankers to the fiscal year 1982 budget, yet you cut eight of them out of the fiscal year 1982 budget in October, 1981? Congress had to add back four in December, and when I tried to add back the second four, it was defeated as unnecessary on the Senate floor.

You are proposing to add \$109 million in fiscal year 1982 for increased stockage of bulk fuel to meet peacetime consumption objectives, yet in October, 1981, you cut some \$100 million out of the fiscal year 1982 budget for such fuel purchases?

You are proposing to add \$98 million to fiscal year 1982 for higher than expected consumer price index retirement pay adjustments for retired military personnel in March, 1982. Yet didn't you cut this amount out of this budget last October based on more optimistic expectations about inflation?

Answer. The merit of the fiscal year 1982 Supplemental should not be judged because some items have been included that were previously reduced in the fiscal year 1982 budget. There is good rationale as to why the three examples you cited were reduced but increased funding is now being requested.

As regards the KC-10 procurement, the rationale for our position on the KC-10 during fiscal year 1982 budget deliberation was related to the tanker role of the KC-10 and our current position related to the fiscal year 1982 Supplemental is related primarily to the cargo role of the KC-10. The Department supported the Air Force request to delete the KC-10 from the fiscal year 1982 budget on the basis that it was of low priority as a tanker aircraft when compared with the KC-135 reengining modification program since the dispersion required by the Air Force mission gave greater weight to the quantity of airframes than the individual fuel carriage and offload capability. During fiscal year 1982 budget deliberations, the Department determined it was necessary to increase our strategic airlift capability as rapidly as possible. Of the airlifter candidates considered, the C-5B and KC-10 were chosen. In order to accelerate the availability of additional KC-10 and C-5B aircraft, all funding alternatives were considered and fiscal year 1982 reprogramming of \$170.9 million and a fiscal year 1982 Supplemental of \$219.1 million were requested to accelerate this needed cargo carrying capability.

Funds requested for the procurement of fuel in the fiscal year 1982 budget were reduced for economic assumptions. Although this position remains unchanged, \$109.2 million is being requested in the fiscal year 1982 supplemental to accelerate the procurement of 2.3 million barrels in order to take advantage of favorable pricing and the availability of fuel. This additional quantity of fuel fulfills the peacetime inventory objective of 36.6 million barrels that is required to meet an expanding force structure.

The supplemental request for Retired Pay, Defense in fiscal year 1982 is \$97.7 million. This program is the net result of several increases and decreases to the amount approved in the fiscal year 1982 Defense Appropriation Act. One change results from a revision to the estimate of the March 1, 1982 Consumer Price Index (CPI) adjustment. The fiscal year 1982 budget for retired pay as amended in October an-

anticipated a CPI adjustment on March 1, 1982 of 8.2 percent. The fiscal year 1982 column of the fiscal year 1983 budget reflects a revised CPI estimate of 8.9 percent. This change in CPI assumptions represents \$58.2 million of the retired pay supplemental. The detail of the supplemental request for Retired Pay, Defense is as follows:

[In millions of dollars]

	Congress action	Fiscal year 1982 column of fiscal year 1983 budget	Differ- ence
Fiscal year 1982 amended request.....	14,981.8	14,981.8	
Survivors' benefits (open season).....	-37.0	-75.0	-38.0
Accounting procedures.....	-6.5		+6.5
March 1, 1982 CPI (8.9 versus 8.2 percent).....		+58.2	+58.2
VA compensation ¹		+25.7	+25.7
October 1, 1981 military pay increase.....		+52.0	+52.0
Fiscal year 1981 actual experience.....		-6.7	-6.7
Revised fiscal year 1982 program.....	14,938.3	15,036.0	+97.7

¹ The fiscal year 1982 amended budget assumed savings of \$60.0 million from VA compensation legislation. A later actuarial projection indicated the savings would be about \$34.3 million. This resulted in an increase of \$25.7 million to our current estimate.

SUPPLEMENTALS

Senator LEVIN. Supplementals are supposed to be for urgent and emergency needs. If these items were not important enough for the administration to keep in the fiscal 1982 budget during its October reductions, why should we?

Answer. The fiscal year 1982 supplemental submitted with the fiscal year 1983 budget request is not intended to restore reductions made in the September amendment. The total request for fiscal year 1982 is about the same amount reported in the September amendment. More recent inflation data were available to us in preparing the fiscal year 1983 budget than were available last fall for fiscal year 1981. Also the current DOD budget reflects a thorough review by DOD and OMB of additional requirements for fiscal year 1982. There are minor overlaps between September cuts and current adds but these are fallouts from a very intensive review of Defense requirements. The fiscal year 1982 supplemental may be divided into four categories as follows:

	Percent
Direct and indirect inflation.....	57
Transfers from other Government agencies.....	3
Programs suggested by congressional committees.....	25
New initiatives.....	15
Total.....	100

ECONOMIES AND EFFICIENCIES

Senator LEVIN. Let me now address your claims of savings from efficiencies/economies:

Mr. Secretary, the Department has made claims of great savings and efficiencies in releasing the fiscal year 1983 defense budget. You have claimed \$41.4 billion in savings by fiscal year 1986 and \$51.5 billion in savings by fiscal year 1987.

Secretary Weinberger told the Committee that these were savings compared with the previous administration's policies. Does this mean the savings are calculated against the last Carter 5-Year Defense Plan?

Answer. Essentially that is correct. We have attempted to identify all economies and efficiencies that are a result of management initiatives, policies or decisions that we have implemented since January 20, 1981. When compiling the figures we made a concerted effort to exclude savings resulting from initiatives implemented before that date. In a few cases, such as the civilian pay cap, previous administrations had implemented or proposed similar initiatives. The savings identified are those resulting from the decisions made by this administration. We believe our list of savings is an honest representation of that basic criteria.

It should be noted that the reporting and collecting of economy and efficiency data in a comprehensive manner is new to us. We do not pretend that the system is perfect or that every single efficiency measure has been captured. However, we are working hard at being able to track these measures through the entire planning, programing and budgeting cycle, including audit follow-up and resolution efforts.

There may well be an item or two on our current list that could be interpreted as being an initiative of the previous administration, but there was certainly not a conscious effort to do so in order to inflate our savings. On the other hand, there are probably a number of economy measures resulting from our initiatives that have been overlooked. We expect to improve on this during the current PPBS cycle.

ECONOMIES

Senator LEVIN. By far the largest portion of these savings relates to the cap on Civil Service pay raises. Almost \$18 billion of the \$41 billion in savings you are claiming by fiscal year 1986 is related simply to the fact that you are capping Civil Service pay raises at 5 percent.

The fact is that the annual Civil Service pay raises have been capped below the level of the comparability surveys which the law requires in every fiscal year since fiscal year 1979.

Caps on Civil Service pay raises are obviously not unique to this administration or to the Department of Defense.

How can you claim that the Government-wide cap on Civil Service pay raises represents a specific management decision to achieve economies in Defense Department operation?

Answer. While the pay cap on Civil Service pay is a Government-wide cap and not unique to DOD initiation, it is appropriate to show the very sizeable impact of the cap on civilian pay, as it is a savings to what the defense budget would otherwise be.

MILITARY RETIREMENT SYSTEM

Senator LEVIN. Another large portion of the \$50 billion in savings by fiscal year 1987 is \$5.5 billion from the reversal of military retired system reforms that were proposed by the previous administration. These reforms would have cost more in the near-term in order to realize some economies in the long-term.

a. Does this mean that this administration does not have any intention of reforming the current military retirement system?

Answer. The administration has included in the fiscal year 1983 budget a significant series of changes in the method by which Federal retirement annuities are set and adjusted. The changes as they pertain to military retirement would—

Provide no CPI increases for retired members whose annuities are 120 percent or more than a similar member retiring today receives. Provide 75 percent of the CPI increase for members whose annuities range up to 119 percent of current annuities;

Limit future adjustments to the lower of active duty basic pay increases or CPI;

Eliminate the 1 year "look-back" provision from the law; and

Round all benefit levels down to the next lower dollar in calculating annuities.

ECONOMIES AND EFFICIENCIES

Senator LEVIN. How does this \$5.5 billion in "savings" from maintaining the status quo in the military retirement system qualify as an economy or efficiency in Defense Department operations?

Answer. As indicated earlier, the savings we reported are calculated against the last 5-year defense plan of the previous administration which reflected certain military retired pay reforms. Those reforms would have cost more in the near term in order to realize some economies in the long term by introducing "vesting" and providing special cash benefits to active duty military personnel after 10 years of service. Annual outlays would have increased through the remainder of this century before annual savings could be expected. Withdrawal of the proposal resulted in savings of \$5.5 billion from the previous administration's 5-year plan.

Senator LEVIN. Last year, during consideration of the fiscal year 1982 defense authorization bill, I urged savings through consolidation of base operation support functions. You are now claiming savings of \$200 million in this area by fiscal year 1986. Yet you strongly opposed my amendment saying it would hurt readiness and could not be accomplished in fiscal year 1982, didn't you. And now you are claiming savings in this area for both fiscal year 1981 and fiscal year 1982? What occurred to change your position?

Answer. Our position has not changed. As I previously stated, we are pledged to seek out savings and efficiencies within the Defense Department, and are trying to do so in an orderly fashion. The \$200 million undefined reduction offered by the amendment for fiscal year 1982, would only have been applied as a general reduction across all operations and maintenance programs. This approach would have resulted in the elimination or deferral of programs vital to the accomplishment of our Defense missions and force readiness. Such action would disrupt our efforts to provide a more productive use of the Nation's defense resources, and to strengthen the areas that contribute most heavily to our readiness posture. Additionally, it is important to recognize that the bulk of savings through consolidations and management improvements to our logistical and support functions cannot be realized during the first-year. Sizable initial cost are usually incurred upon implementation, such as severance pay, cost to relocate equipment, and other close down expenses. It sometimes takes months or years to amortize these costs before savings begin to accrue. Specifically, in March 1981, we established saving targets consistent with our objective of reducing unnecessary duplication in administrative and logistical base support services. These targets represent over \$200 million in savings by the end of fiscal year 1987. To provide incentives for this to occur, savings achieved through consolidation may be reapplied at the base level, and will be reflected in the budget submissions. The above represents only a portion of the actions taken by the Defense Department in the continuing and concerted drive against waste and inefficiency.

Senator LEVIN. I would add that my amendment also included savings from consolidating management of the Service's consumable supplies as well as from unification of the military's separate airlift and sealift management activities. You also opposed these on the same grounds, didn't you? Yet Secretary Weinberger in testimony to the House Budget Committee in September, 1981, claimed credit for such savings. Are these in your fiscal year 1981-87 savings estimates? Why did you change DOD's position on these also?

Answer. As I have stated in my answer to your previous question, our position has not changed. As to the examples you cite, we have made significant progress in implementing these management improvements. With regard to the consolidation of the management of the Service's consumable supplies, I have approved an initial increment of 200,000 items to be transferred from the Services to the Defense Logistics Agency. Savings of \$15 million have been identified to this increment and those savings are reflected in the fiscal year 1983 defense authorization bill and the out-years. This portion of the transfer will be completed in October of this year, at which time we will evaluate the impact and consider the transfer of additional items. Concerning transportation management, we are consolidating certain transportation activities. I have approved a major realignment of functions between the Military Traffic Management Command (MTMC) and the Military Sealift Command (MSC) to improve how responsively and efficiently we manage and deploy traffic. The first step was the consolidation of cargo offering and booking activities under MTMC. By October 1982 we will have strengthened the Joint Deployment Agency and consolidated MTMC and MSC into a single command.

COST ANALYSIS IMPROVEMENT GROUP AND BETTER COST ESTIMATES

Senator LEVIN. Your statement emphasizes how much DOD has done to improve its budgeting procedures so that its cost estimates are much more accurate. One of your major 32 management initiatives was directed toward better cost estimating, as a acknowledgement that DOD and the services have had serious problems in the past with underestimating costs to develop and procure weapons systems.

It is my understanding that DOD has a special office within the Office of the Secretary—in its Program Analysis and Evaluation Branch—which was established even before you took office to give more independent scrutiny to program cost estimates from the services and thus try to arrive at more accurate estimates; is this not so?

Answer. We do have an organization within the Office of the Secretary of Defense established in 1972 to provide independent scrutiny of program cost estimates. It includes members from the offices of the Under Secretary of Defense (Research and Engineering), the Assistant Secretary of Defense (Comptroller), the Assistant Secretary of Defense (Manpower, Reserve Affairs and Logistics), and the Director of Program Analysis and Evaluation. It is chaired by a Program Analysis and Evaluation member.

In the past, one of the principal functions of this organization has been to advise the Chairman of the Defense Systems Acquisition Review Council on cost matters.

While continuing this responsibility, I have also used the organization to provide me directly with cost reviews of major systems. These reviews, and others conducted by the Military Services themselves, have led to decisions to provide increased funding for selected systems in the fiscal year 1983 budget.

Senator LEVIN. This office, known as the Cost Analysis Improvement Group—the CAIG—is regarded as the most independent program cost estimating body within the Pentagon; is it not?

Answer. The CAIG is the Office of the Secretary of Defense's independent cost estimating organization. It reviews the cost estimates for Department of the Army, Navy, and Air Force major weapon systems. Its assessments are made independently from those of each of the Military Departments. But each Military Department has its own independent cost estimating capability, and I have directed the Service Secretaries to make increased use of that capability in preparing their budgets for major programs.

Senator LEVIN. Historically speaking, is it not true that when one compares initial program cost estimates done by the CAIG and done by the military services with the actual costs experienced, that CAIG's estimates usually have been more accurate and closer to the mark?

Answer. It is true that the CAIG has prepared a number of cost estimates for DSARC milestone reviews that were higher than those of the Military Departments and that have proven to be accurate. That is exactly why I am enlarging the use of CAIG estimates, and directing the Service Secretaries to make greater use of their own independent cost estimating capabilities.

Senator LEVIN. Could you provide us additional historical data using all the major weapons programs reported in the Selected Acquisition Reports whose costs have now stabilized comparing CAIG and service estimates with present estimates of program costs?

Answer. CAIG analyses are only carried out for systems at the time of Defense System Acquisition Review Council (DSARC) milestone reviews. (The CAIG is the principal advisor to the DSARC Chairman on cost matters.) Thus, up-to-date CAIG evaluations are available only on those systems that have been up for DSARC review recently. To assure the complete independence of CAIG reports—which are internal DoD working documents—they are not circulated outside of the Department.

Senator LEVIN. Last December during our B-1 deliberations I asked you for CAIG's program estimate for the B-1B so we might see where and how its assumptions and cost estimates differed from those provided by the service. That request was refused.

Why shouldn't Congress have access to such CAIG estimates for all programs to learn and understand why and how they differ from those provided by the services?

Why wouldn't this information help Congress make better decisions about present and future defense programs, especially from the perspective of overall "affordability" making sure there are enough dollars in the defense budget to buy enough of the program we need in sufficient quantities? Your own statement stresses the importance of knowing overall affordability in making correct decisions about present and future defense programs.

Answer. The use of most likely cost estimates is one of the major management initiatives of this Administration in the weapons acquisition area. There is no question of the importance of such estimates in assessing the affordability of individual systems and allocating defense resources among weapons.

Just as each Member is responsible for his vote on an issue, so the final responsibility for determining most likely costs and managing acquisition programs to meet those estimates belongs to the Secretary of Defense. Only the Secretary has access to all the information elements necessary to make a fair determination of most likely cost.

Both this Secretary and Deputy Secretary have made frequent use of CAIG materials in making judgments on most likely program costs, as well as information from other sources throughout the Department. It is essential that all of these sources continue to provide their views to the Secretary in a completely candid way for the Secretary to make informed judgments. Circulation of all of these diverse views outside the Department would constrain their candor, and, therefore, their usefulness.

DOD PRIORITIES

Senator LEVIN. If the President ordered you to cut the fiscal year 1983 defense budget by \$10 billion, \$15 billion, or \$20 billion, in which programs would you make cuts? Please provide them in each case and provide specific dollar amounts cut.

Answer. We have already deleted the low priority programs in preparing the fiscal year 1983 budget submission. This has taken place throughout the programming and budgeting process. The Services and the DOD believed a requirement existed for more resources than are in the present program. The overall Defense expenditure top line has come down substantially since last March. We think we have developed a minimum five year program to provide an adequate deterrence in the face of the substantial and growing threat. Cuts can only be made by cutting capabilities. We view our present program as the minimum necessary to maintain readiness, make necessary improvements in sustainability and carry forward modernization at an efficient rate.

JAPANESE DEFENSE BUDGET

Senator LEVIN. As you know, some of our allies are doing better than others as far as contributing their fair share to the common defense.

Last year, I asked General Jones whether he agreed with the assessment that the Japanese increase of 7.61 percent in their 1981 defense budget above their 1980 defense budget was both disappointing and inadequate. I also asked whether he agreed with former Defense Secretary Harold Brown's reaction that the increase in the 1981 Japanese defense budget over the 1980 figure seemed to demonstrate a sense of "complacency" about the security risks in today's world facing both Japan and its American ally.

He agreed with both assessments.

[The excerpt from the Senate Armed Services Committee March 4, 1981 (NATO Allies in Persian Gulf) fiscal year 1982 hearings follows:]

NATO ALLIES IN PERSIAN GULF

Senator LEVIN. General could you identify specifically which of our allies are failing to carry their "fair share" of the defense of the Persian Gulf, as well as those who will fail to meet their commitments to NATO's annual spending increases?

General JONES. Our allies could provide only limited capabilities in the Gulf region; therefore, we're interested in seeing them take a larger share of the burden of defending Western Europe, which gives us greater flexibility for what we could do in the Gulf. I would like to see all our European allies increase their defense capabilities. Some need substantial outside help in order to do so.

Senator LEVIN. Can you specifically identify what programs these allies are failing to implement, as well as those which they must accelerate, if they are to carry their "fair share" of the burden for the common defense?

General JONES. The NATO nations in general are behind in meeting their force goals which are arrived at in concert through the NATO Defense Planning Cycle. In addition, progress on the Long Term Defense Program (LTDP) measures has been uneven.

Senator LEVIN. Do you agree with the assessment that the NATO Long Term Defense Program is behind schedule and that the Japanese increase in their 1981 defense budget over 1980 is disappointing and not adequate? Former SECDEF Brown said the Japanese defense budget for 1981 seemed to demonstrate a sense of "complacency" about the security risks in today's world to them and to their American ally. Would you agree with this assessment?

General JONES. Yes, to both questions.

Senator LEVIN. How can Congress, DOD, the JCS and the President work together to press the Allies and the Japanese to do more?

General JONES. In all fora, we must individually and collectively work to convince them of the growing threat, the vulnerabilities, and the need to do more.

This year, considering the implications of the events in Poland, why would you disagree that the recent Japanese decision to increase their 1982 defense budget by only 7.75 percent above 1981—an increase of a mere .14 percent above last year's increase—again is disappointing and inadequate and again demonstrates "complacency" about the security risks in today's world to Japan and the United States?

Answer. The Japanese increase of 7.8 percent for their fiscal year 1982 came at a time when other government expenditures were held to an average of 2 percent or less. In 1981 the defense and overall governmental increases were considerably

closer. The 1982 figure demonstrates a commendable awareness of the need and a most appropriate change of priorities. Japan will need to do much more in the future, but the 1982 efforts represent a sound beginning for joint burden sharing affirmed under the roles and missions approach in the Reagan-Suzuki joint communique of May 1981.

Senator LEVIN. Is it not true that most knowledgeable defense experts have predicted that Japan would need to increase its defense spending annually by at least 15 percent to accomplish its present 5-year defense program by 1983, when we have asked them to complete it?

Doesn't this latest disappointing increase mean that completion of this program could be even further delayed?

Answer. There is no agreed upon figure of how much it would take Japan to achieve its present defense program by 1983. We are not encouraging the Japanese to meet any arbitrary statistical goals but rather to do what is necessary to carry out its roles in a U.S.-Japan division of labor in the defense area. Japanese press reports do indicate that, owing to future procurement items already included in this year's and previous budgets, an increase in excess of 10 percent is likely for 1983.

Senator LEVIN. Since the Japanese Government earlier this year agreed to assume a new responsibility to defend its air and sea lanes out to 1,000 miles from Japan—which will add new requirements to the present plan, adopted in 1976—doesn't this latest inadequate increase mean Japan will be unable to meet its commitments to its U.S. ally?

Answer. The latest increase of 7.8 percent, over 4 percent in real growth, in Japan's defense budget came at a time when other government agencies were held to less than 2 percent, negative real growth. The defense increase demonstrates a commendable awareness of the need and represents a sound beginning for joint burden sharing which will allow Japan to assume the responsibility to defend its air and sea lanes out to 1,000 miles.

GERMAN DEFENSE SPENDING

Senator LEVIN. I also understand that the Germans will fail to meet the 3 percent real growth commitment to NATO in 1982 because their 1982 defense budget contains much less real growth. What real growth do you expect this year from West Germany?

Answer. The 1982 German Government Budget has only recently been adopted and our analysis is at best preliminary. A more complete evaluation will be included in the Secretary of Defense's Report to Congress on the Allied Contribution to the Common Defense in response to the Levin Amendment which is due to Congress on March 1, 1982.

In 1981 Germany expended DM 52.221 billion (NATO definition) for defense, a nominal increase of 7.6 percent over 1980. Based on the current official German GDP deflator (4.1 percent), this represents a 3.4 percent real increase. Other unofficial estimates of the GDP deflator could reduce the real increase to as little as 1.9 percent.

The 1982 German Budget contains DM 54.402 billion for defense which, based on the official Government estimate of 4.25 percent inflation, would give zero real growth. Other GDP deflator estimates would produce a real growth rate in the range of a -1.4 to 0.7 percent. The 5.2 percent nominal growth of the defense budget, however, is well above the Government budget as a whole (2.8 percent).

MASTER RESTATIONING PLAN

Senator LEVIN. I also have been informed that the Germans are not being very responsive to our request that they contribute to financing our Master Restationing Plan to move our troops into better defensive positions. Can you confirm that it took the Germans about 12 months just to inform our Army negotiators the names of those within the German Government with whom they are to negotiate our request?

Answer. The German Government informed us in September 1981 that they would administratively support the Master Restationing Plan. We then asked for points of contact for initiating discussions. They responded to this request in December 1981, and subsequently agreed to initiate such discussions. We anticipate that the initial formal meeting will take place in March 1982.

SENATE CONCURRENT RESOLUTION 46

Senator LEVIN. Last year, I also asked General Jones how Congress, the executive branch and the military services could work together to press the allies, especially

the Japanese to increase their defense efforts. He answered "in all fora, we must individually and collectively work to convince them of the growing threat, the vulnerabilities, and the need to do more."

Mr. Carlucci, would you agree with this response?

Answer. I agree with that position.

Senator LEVIN. S. Con. Res. 46, my sense of the Congress resolution calls on the Japanese to spend at least 1 percent of their GNP—as they have promised to do but have so far failed to do—on defense.

This resolution has 26 cosponsors in the Senate—a majority on this Committee—and it was introduced on the House side by the Chairman of the House Foreign Affairs Committee.

a. Wouldn't passage of this resolution by the full Congress just be following General Jones's advice, with which you agree, to use all fora to convince our allies to do more for our common defense?

Answer. The rationale for Japanese defense increases contained in S. Con. Res. 46 is completely reasonable. However, the administration's desire for these increases is not driven by desires of meeting arbitrary statistical goals. If Japan or any other country increases its defense expenditures by a large amount but spends that increase unwisely, our mutual interests are not served. We are interested in actual Japanese capabilities to defend their territory, their surrounding seas and skies and their sea lanes to 1,000 miles, missions which they say are authorized for them to perform. We believe the Japanese can calculate what it will cost them to achieve these capabilities and that those costs will exceed one percent of Japan's GNP; however, we are interested only in that capability, not the precise spending figure.

Senator LEVIN. Why wouldn't congressional approval of this resolution be an appropriate reinforcement of executive branch positions that our allies should do more for defense, as well as a demonstration of the way many of our citizens believe?

Answer. The position of the executive branch is that our allies should do more for defense in response to a rational division of labor approach rather than merely to meet arbitrary statistical goals. Support of the Congress for increased allied defense efforts to promote more effective defense capability would be welcome.

COMPETITION IN DEFENSE PURCHASES

Senator LEVIN. Secretary Carlucci, last July you added to your list of 31 initiatives to improve the acquisition process a 32nd initiative—greater competition in Department of Defense contracting. There have been a series of hearings, studies and reports in recent years generally concluding that there is a great potential for savings through expanded competition. Indeed, a July 1981 General Accounting Office Report (GAO) found that 25 out of a sample of 109 contracts in its sample "had been inappropriately awarded noncompetitively." GAO estimated "as such as 25 percent" could have been saved through increased competition. Yet according to figures prepared by the Department of Defense (Washington Headquarters Services) for fiscal year 1981 roughly 33 percent of the dollar value of contracts awarded in that fiscal year were awarded without any competition (this excludes follow-on contracts). These contracts totaled over \$28.5 billion.

What specific efforts is the Department of Defense undertaking in connection with the 32d Carlucci initiative to stimulate greater competitive contracting—either by advertising, negotiated competition, technical competition, or otherwise—in the Department of Defense? Have you implemented any of the recommendations in the July 1981 report by GAO to Congressman Solarz? Which ones? Why were the others not implemented?

Answer. In July 1981 the Military Departments and Defense Agencies having procurement authority were requested to develop management objectives for the enhancement of competition and to submit their respective plans for achieving these objectives for review. Their responses have been positive and evidence strong support for this initiative. To assure that all DOD components were following concepts and procedures that would produce meaningful results, this was followed up in November 1981 with direction that actions be taken to: (1) designate advocates for competition in all buying organizations, (2) insure that each commander understands his responsibility for insuring maximum feasible competition, (3) establish goals for competition in all buying organizations, (4) make competition in systems development and production a matter of special emphasis, and (5) develop procedures for identifying and publicizing significant achievements in competing contractual requirements. I believe these actions clearly demonstrate our commitment to both enhance and achieve more effective competition in the acquisition of supplies and services.

The possibility of competing weapons systems is considered at all steps in the acquisition process. Among the techniques being used are dual or second sourcing, leader/follower, joint teaming, competitive parallel development, and directed subcontracting.

Other procedures designed to enhance competition are:

- Publicizing proposed procurements in the Commerce Business Daily;
- Publicizing for sources to perform research and development;
- Advance procurement plans;
- Component breakout;
- Spare part breakout program;
- Encouraging capital investment;
- Using commercial standards;
- Procuring commercial products; and
- Use of advance or progress payments.

We have essentially implemented all four of the recommendations in the July 1981 report by GAO to Congressman Solarz.

1. While we believe our Defense Acquisition Regulation (DAR) guidance on justifying noncompetitive procurements is adequate, we did direct DOD components to forward to their contracting officers for use the guideline questions concerning noncompetitive procurements included in the GAO report.

2. We have directed the Military Departments to establish goals for competition in all buying organizations.

3. We plan to monitor these goals. Selected contract files are reviewed by procurement management review teams and internal auditors to assure they were appropriately awarded.

4. The Defense Nuclear Agency has strengthened its controls over early starts and unsolicited proposals.

GOALS FOR COMPETITION

Senator LEVIN. Have you given the military services targets or goals for expanding competitive contracting? What are these goals? How are they expressed?

- a. As a percentage of contract actions?
- b. As a percentage of total dollar value?

Answer. In November 1981 we directed the Military Departments and Defense Agencies to establish goals for competition in all buying organizations. Goals are generally expressed in a percentage of dollars awarded competitively. For example, the Defense Mapping Agency has established a goal for fiscal year 1982 to award competitively 64 percent of applicable contract dollars. The Air Force's current objective is to achieve a competition level of 40 percent by the end of fiscal year 1984.

SUBCONTRACTOR COMPETITION

Senator LEVIN. Are you taking any initiatives—even on noncompetitive contracts—to stimulate competitive contracting on the subcontractor level? If so, what are those initiatives? If not, why not?

Answer. We have several policies in this area, including:

The following clause is included in all negotiated contracts over \$10,000, except in firm-fixed-price contracts where award is on the basis of effective price competition or where prices are established by law or regulation:

"The contractor shall select subcontractors (including suppliers) on a competitive basis to the maximum practical extent consistent with the objectives and requirements of the contract."

Clauses in the larger contracts offering subcontracting opportunities require contractors to develop subcontracting plans designed to assist small business and small disadvantaged business concerns to participate in subcontract opportunities. (This also encourages competition.)

We utilize directed subcontracting in some of our weapons systems programs whereby the prime contractor is required to develop a second source for a particular component through competitive subcontracting.

We have an active component breakout program.

We have a program to break out spare parts from major system prime contractors for competitive procurement or direct purchase from the actual manufacturer.

COMPETITION IN DEFENSE PURCHASES

Senator LEVIN. Please provide for the record the following information on competition for Defense Department contracting for fiscal year 1980, fiscal year 1981, and projections for fiscal year 1982:

a. Total dollar value and number of contracts awarded.

b. Total dollar value and number of contracts awarded competitively in each of the following categories—price competition, design competition, competitive negotiation—and each of these categories as a percentage of the total dollar value of contracts awarded.

c. Total dollar value and number of non-competitive contracts awarded, breaking out follow-on contracts to price, design, or other competition; and each of these categories as a percentage of the total dollar value of contracts awarded.

Answer. The requested information on competition in DOD contracting for fiscal year 1980 and fiscal year 1981 is attached. Data is not available to make projections for fiscal year 1982.

	FY 1980 ^{1/}			FY 1981		
a. Total dollar value and number of contracts awarded:						
	Dollars (billions)	%	Number (millions)	Dollars (billions)	%	Number (millions)
Total	\$83.7		12.07	\$105.2		12.75
Exclusions ^{2/}	16.4		2.43	17.0		3.19
Total subject to competitive reporting	\$67.3	100%	9.64	\$88.2	100%	9.56
b. Competitive Awards:						
Price competition	\$19.4	28.8%	4.40	\$29.5	33.3%	4.58
Formal advertising	5.6	8.3	0.61	7.0	7.9	0.63
Competitive negotiated	13.8	20.5	3.79	22.5	25.4	3.95
Design competition	5.7	8.5	0.01	6.5	7.4	.02
Total competition	\$25.1	37.3%	4.41	\$36.0	40.7%	4.60
c. Noncompetitive awards:						
Follow-on contracts	\$14.7	21.8%	0.03	\$20.8	23.6%	.03
Price competition	1.4	2.1	3/	2.2	2.5	3/
Design competition	13.3	19.7	3/	18.6	21.1	3/
Catalog or market price ^{4/}				3.0	3.4	.01
Other noncompetitive	27.5	40.9	5.20	28.4	32.3	4.92
Total noncompetitive	\$42.2	62.7%	5.23	\$52.2	59.3%	4.96

^{1/} The FY 1980 published data have been adjusted to reflect them on the same basis for competitive trending as FY 1981 data.

^{2/} Transactions excluded from reporting consist of: (1) awards for brand-name items for commissary resale; (2) awards to nonprofit institutions; (3) awards to regulated monopolies for utilities where the price negotiated is based on prices set by law or regulation; (4) awards made pursuant to Section 8(a) of the Small Business Act (15 U.S.C. 637(a)). There is no opportunity or reasonable expectation that contract awards in these categories can be awarded on the basis of price competition. In addition, intragovernmental transactions (procurements placed with other Federal agencies) and foreign military sales, whereby a foreign country or international organization undertakes to bear the cost of the procurement, are also excluded.

^{3/} Data not readily available.

^{4/} This category was included in "Other noncompetitive" in FY 1980.

PRODUCTION PHASE COMPETITION

Senator LEVIN. On page 14 of your draft statement, you say DOD currently has several major weapon systems with production competition at the prime and sub-contractor level and that you plan to add more in the future. Please identify these

present and future systems and stipulate at which level there is competition, which components of each system are involved, and what are the annual amounts in the 5 year defense program under competitive contracts for these systems?

Answer. We currently have competition at the prime contractor level in the AIM-7M and FFG-7 programs, and plan to add the MLRS, HARM, AIM-9M, Tomahawk, CG-47 (AEGIS), and IR Maverick programs. Even where it is not feasible or practical to have a second production source at the prime contractor level, a significant amount of the total system is competed in one way or another at the component, subcontractor, or lower tier supplier levels. Just considering DOD awards of prime and major component contracts, production phase competition is present or is planned to some extent in 15 of the 48 systems in the September 1981 Selected Acquisition Report. The total estimated value of the production phase of these 15 systems is \$83.4 billion. Perhaps the best example of competitive effort is the Tomahawk cruise missile program. At least 85 percent of the production phase of this program is either planned or presently competitive.

DUAL SOURCING EFFECTIVENESS

Senator LEVIN. Dr. Jacques Gansler, a former Defense Department procurement official, has advocated greater use of "dual sourcing" in the acquisition of even major weapons systems as a way of injecting more competition into areas of the Defense procurement process traditionally noncompetitive. Mr. Carlucci, what is your appraisal of the effectiveness of dual sourcing as a way to control procurement costs?

Answer. There is little doubt that the development of dual or second sources of supply can have a salutary effect on the production cost of a weapons system. However, care must be exercised before this concept is introduced into an acquisition plan as it involves certain, sometimes substantial, "up front" costs. For example, the key element that must be considered is whether or not the quantities to be purchased are sufficiently large to make it cost effective to have a second production source.

DUAL SOURCING IN CURRENT SYSTEMS

Senator LEVIN. Are there currently any DOD weapons systems programs which are dual sourced? Which ones? Why were they dual sourced? How much cost savings do you estimate accrued from dual sourcing? If not, why not?

Is the Department proposing dual sourcing starting in fiscal year 1983 for any programs? Which ones? What is the basis for these proposals? If not, why not?

Answer. We presently have competition (dual sourcing) at the prime contractor level in the AIM-7M and FFG-7 programs and plan to add the MLRS, HARM, AIM-9M, Tomahawk, CG-47 (AEGIS), and IR Maverick programs. When dual sourcing is considered at prime and major component levels (direct DOD awards), production phase competition is present or is planned to some extent in 15 of the 48 systems in the September 1981 Selected Acquisition Report. Plans to introduce competition are routinely considered in the Acquisition Strategy part of the DSARC Review process. Dual sources are established for a variety of reasons, including the cost benefit of competition and enlarged production capability. It is difficult to determine the precise cost savings that have resulted from the introduction of competition.

DUAL SOURCING

Senator LEVIN. Mr. Carlucci, you have stated that there is nearly \$600 million in the budget request to pursue multiyear procurement. How much is in the budget request to establish competition through dual sourcing?

Answer. The Department attempts to establish and maintain dual sources at the total weapon system, individual subsystems or at the spare part level where economically feasible. Since these efforts encompass the entire range of DOD procurements and at different implementing levels, there is no accurate way to determine the total fiscal year 1983 cost of establishing competition. Specific examples of fiscal year 1983 funding include \$80 million for a second producer of the HARM missile and \$93 million to establish a second source for the M-1 Tank Fire Control System.

PROGRAMS WITH DUAL SOURCES

Senator LEVIN. Mr. Carlucci, how many procurement programs in the Department have dual sources of production to stimulate competition?

Answer. Considering both DOD awards of prime and major component contracts, production phase competition is present or is planned to some extent in 15 of the 48 systems in the September 1981 Selected Acquisition Report. This, of course, is at the major system level. Dual sources exist in many of our smaller non-SAR programs and in our procurement of spare parts and supplies.

LEGISLATION TO PUBLICIZE PROPOSED PROCUREMENTS

Senator LEVIN. Last year Senator Cohen and I introduced, and the committee and Senate approved, a provision designed to promote less use of sole-source contracts by the Department of Defense. The proposal, which incorporated a whole list of exemptions proposed by the Department of Defense, was based on the existing regulatory system for notifying potential bidders. It did nothing more than attempt to make the existing notice system provide a more meaningful opportunity to bid, before a contract was negotiated and awarded on a sole-source basis. The provision dropped out in the conference on the Defense Authorization bill due to House opposition, largely prompted by a DOD letter opposing the amendment.

Senator Cohen and I have introduced essentially the same proposal this year in the form of separate legislation. It has also been introduced in the House.

If DOD does not support this legislation as submitted, what specific changes would it recommend to make it acceptable to DOD?

Answer. We do not favor this legislation. In our opinion, it is not necessary in view of the current publicizing requirements stemming from the Small Business Act. Also, we do not believe it will increase competition.

There are three provisions of the legislation that are of major concern to us. The bill would prohibit the entering into of contract negotiations until 30 days after publication of an advance notice in the Commerce Business Daily (CBD). Thus, requests for proposals could not be given to anyone, including firms responding to the brief CBD notice, during that 30-day period. This prohibition would delay receipt of detailed requirements by potential suppliers, would delay their efforts to develop proposals, and would delay the procurement process. Our present general policy is to publicize proposed procurements at least 10 days prior to issuing solicitation documents.

The exemptions listed in the legislation do not include several types of procurements that should be exempted, such as procurements of commercial transportation services furnished by regulated common carriers, procurements to be made by an order placed under an existing contract or basic ordering agreement, facilities contracts when the performance required can be obtained only from one source, and procurements as to which competition is precluded because of the existence of patent rights, copyrights, or proprietary information.

The annual report required by the legislation is unnecessary, burdensome, and duplicative of existing requirements for government-wide reporting of procurement data. Our current reporting system is adequate to provide data to Congress on the extent of competition in procurement.

COMPETITION IN DEFENSE PURCHASES

Senator LEVIN. The Office of Federal Procurement Policy (OFPP) has circulated a draft proposal for a Uniform Federal Procurement System. Part of their proposal introduces—to use the words of OFPP—“new statutory concepts of competition together with new methods to stimulate and expand the use of competition.” OFPP contends these new concepts and methods “give first priority to what is in the market place rather than the previous Government concept of what ought to be in the market place.”

Are you familiar with the OFPP proposals regarding competition? Do you believe they would help generate more competition on DOD contracts? If so, why? If not, why not?

Answer. We have reviewed the Office of Federal Procurement Policy's (OFPP) draft proposal for a Uniform Federal Procurement System. Regarding the legislative changes that OFPP intends to recommend on competition, we are concerned that it will negate the substantial body of precedent and case law developed over the past 36 years. Until we can be certain that the benefits outweigh the disadvantages, perhaps through a test, we do not believe that any wholesale statutory changes should be made to our current statutory base.

Senator LEVIN. One suggestion made by OFPP is that greater incentive should be given to competitively negotiating contracts—as opposed to competition via formal advertising. Why should we remove the preference for formal advertising where practicable as the way to generate the greatest number of potential competitors?

Answer. It is our view that competitively negotiating contracts is a very legitimate and effective form of competition and should be recognized in the same manner as formal advertising.

Senator LEVIN. Do you view the OFPP proposal as in any way expanding the statutory basis for noncompetitive (i.e., sole-source) procurement?

Answer. We do not view the Office of Federal Procurement Policy proposal as in any way expanding the statutory basis for noncompetitive procurements.

INDUSTRIAL PREPAREDNESS

Senator LEVIN. Significant deficiencies have long been known to exist in the defense industrial base which could hamper its ability to respond to crisis for wartime needs. Conspicuous as a major part of this problem is the massive shortage of skilled manpower, such as machinists, to produce defense goods.

Secretary Carlucci, your 32 initiatives included several DOD actions aimed at strengthening the defense industrial base. Specific objectives among these 32 initiatives included insuring skilled manpower exists to meet the peace and wartime demands of American industry, improving the quality of American workmanship and products and giving American industry the incentives to undertake a program of capital investment.

Your statement today focuses exclusively on your initiatives to promote capital investment to either expand or modernize our productive capacity. It ignores the "people" variable on the equation. You are quick to point out correctly that all the best weapons in the world will not win our wars without the qualified personnel to operate and maintain them. In the same way, all the machines in our factories cannot produce defense articles without skilled personnel—machinists, joiners, welders, etc.

Yet in my research into the industrial preparedness program leads me to this, that little more than lip service is being paid to the need to develop skilled defense manpower.

Has the DOD ever quantified exactly which critical industrial skills it needs now to accomplish its program? what it will need in mobilization? and what the shortages in these skills are now and are likely to be in mobilization?

Answer. The Defense Department, with assistance from both the Departments of Commerce and Labor, has developed a Defense Economic Impact Modeling System (DEIMS) to measure the impact of the Defense budget on the U.S. economy. A subset of the system, the manpower requirements model, quantifies the skilled labor demand for 73 job categories over a variety of industrial sectors (both defense and non-defense). These forecasts pinpoint the occupations which are critical to defense needs as well as their anticipated growth.

In addition, the Defense Department and Department of Labor have established an interagency study group to address the issue of manpower requirements needed during mobilization for both "in-house" activities and defense contractors. As a first step, the study group is investigating in detail the potential civilian mobilization work force issues associated with a specific geographic region.

In an effort to quantify on a national level the skills shortage problem, the Defense Department has been working with the Departments of Labor and Education, industry and trade associations, the American Vocational Association and an industry based task force set up to analyze and quantify the skills shortage problem.

SHORTAGE OF SKILLED MANPOWER

Senator LEVIN. What specific training programs have been or will be undertaken to assure the availability of these skilled personnel?

Answer. The Defense Department (DOD) has initiated a cooperative effort among the Departments of Labor and Education to review the needs of DOD with respect to skilled manpower. Through our Defense Economic Impact Modeling System (DEIMS), manpower requirements model, projected skilled labor demand for 73 occupations will be analyzed. It is anticipated that these requirements will act as baseline data with respect to increased emphasis being placed on apprenticeship training, upgrading and retaining of the industrial work force. These projected manpower requirements are being furnished to the state and local offices of responsible agencies to assist them in evaluating the regional supply to meet this demand.

INDUSTRIAL PREPAREDNESS FUNDING PROFILE

Senator LEVIN. Secretary Carlucci, how does the level of funding for the industrial preparedness program in the fiscal year 1983 budget compare, by Service and by

program, to that in fiscal year 1979, 1980, 1981, and 1982? What is programmed for the fiscal year 1983-87 period? What other major initiatives are planned in this area in addition to those already mentioned in your statement?

Answer. Funding profiles for the fiscal year 1979 through fiscal year 1983 Industrial Preparedness Program, by Service and by program, are displayed below.

[In millions of then-year dollars]

	Fiscal year—					Total
	1979	1980	1981	1982	1983	
Army.....	538.2	618.0	860.3	765.7	876.4	3,658.6
Navy.....	29.7	16.1	9.4	28.8	64.1	148.1
Air Force.....	88.4	80.4	97.7	136.6	215.2	618.3
DLA.....	20.9	23.8	26.0	28.4	29.5	128.6
Total.....	677.2	738.3	993.4	959.5	1,185.2	4,553.6
Procurement.....	520.0	587.5	828.1	791.0	973.4	3,700.0
O. & M.....	119.2	127.6	162.2	168.5	193.5	771.0
Construction.....	38.0	23.2	3.1		18.3	82.6
Total.....	677.2	738.3	993.4	959.5	1,185.2	4,553.6

The fiscal year 1983-1987 program contains approximately \$7.2 billion for industrial preparedness. There is one additional initiative which we are working on. We have drafted and will be publishing completely revised Industrial Preparedness (IP) Defense Guidance. Objectives of this guidance are:

1. Develop an industrial base capability to produce and deliver our five-year peacetime procurement program efficiently, effectively, and as quickly as possible;
2. Develop an industrial base capability which will provide surge responsiveness for selected critical systems/items;
3. Develop an industrial base capability which will permit accelerating the attainment of our programmed sustainability levels for selected critical systems/items; and
4. Increase industrial preparedness planning funding to levels required to accomplish the first three objectives and integrate industrial preparedness resource requirements into the Planning, Programing, and Budgeting System (PPBS).

The foregoing objectives will substantially strengthen our industrial preparedness program by establishing incremental goals for program formulation. This will permit more informed decisions at all levels, thereby allowing us to more efficiently allocate our limited resources. The implementation of this guidance will also allow us to systematically eliminate the production bottlenecks and constraints which preclude us from developing and maintaining a responsive industrial base—a base which could not only support our forces in the full spectrum of potential combat but which would also pose a formidable deterrent to conflict.

ECONOMIC EFFECTS OF DEFENSE SPENDING

Senator LEVIN. During your testimony, you claimed that defense spending helps the economy because of its jobs creating impact. You referred to specific studies on this "multiplier" effect and said that defense spending creates more jobs than other government spending.

Please provide these studies on the economic and employment effects of defense spending to the Committee.

Answer. In September 1981, staff in the Office of the Secretary of Defense used the Data Resources, Inc. (DRI) macroeconomic model of the United States economy to compare the impact of a reduction in defense outlays to reduction of the same size personal transfers to individuals by the Federal Government. The reduction considered was \$18.2 billion in 1972 constant dollars accumulated over the 4-year period fiscal year 1983-1986. The analysis also used a set of fiscal and monetary policy assumptions compatible with the then newly enacted Reagan tax package.

The DRI model showed that a reduction in defense outlays yielded a reduction in GNP, again measured in 1972 constant dollars, of \$34.7 billion over the years 1983-1986. The implied defense multiplier for that 4-year period is then a very significant 1.9 (\$34.7 billion/\$18.2 billion = 1.9). In contrast, the DRI model showed that a reduction in transfers to individuals of \$18.2 billion results in a net reduction of just

\$13.6 billion (due to offsets such as higher levels of public assistance and more unemployment compensation payments). As a result, there was a loss in GNP of \$24 billion (1972 dollars). The implied fiscal multiplier from the reduction in transfers to individuals is 1.3 ($24/18.2 = 1.3$).

The DRI model showed that the hypothetical cut in defense spending would cost about 663,000 jobs. This indicates that per billion in reduced spending on defense, we should expect to lose 36,400 jobs. We know from other analysis that approximately 28,500 jobs are created per billion of defense purchases of goods and services. The remaining 7,000 positions are a result of the additional growth recorded in the non-defense parts of the private economy as a result of the wages and salaries of the employed defense workers being spent in communities across the Nation.

B1-B PROGRAM MANAGEMENT

Senator LEVIN. On November 4, 1981, in a memorandum to Air Force Secretary Verne Orr you directed him to submit to you within 30 days "a program management plan outlining your ideas on how best to achieve cost and schedule objectives for the B-1 program."

Please submit this plan to the committee.

Answer. The Department regards this plan as an internal working document. The Department fully informs the Congress of the status of the B-1 in the Quarterly Selected Acquisition Report.

Senator LEVIN. The memo to Secretary Orr also directed that "quarterly reports will be sent to me describing progress achieved in carrying out the B-1 program within its budgeted cost."

Will you submit these quarterly reports to Congress.

Bi-weekly reports also are being submitted. Will you provide these to the committee.

Answer. Both the quarterly reports and bi-weekly reports are considered to be internal working documents. The Department fully informs the Congress of the status of the B-1 in the Quarterly Selected Acquisition Report.

MAJOR WEAPONS SYSTEM NEW STARTS

Senator LEVIN. On page 5 of your statement you refer to the special attention DOD has paid to proposals submitted by the military services for beginning major new weapons systems—"New Starts"—to insure that such weapons are justifiable and affordable. You state "Our first annual review resulted in disapproval or restructuring of 6 of 16 programs proposed by the services".

What are those 16 new programs, and what were their proposed life-cycle costs in constant (fiscal year 1983) and current dollars as proposed by the services?

Answer. The 20 fiscal year 1983 major system new starts that were reviewed included Patriot Improvements, All Source Analysis System, Mobile Protected Gun, Multiple Launch Rocket System/Terminally Guided Warhead, Army Helicopter Improvement Program, Light Air Defense System, 155mm Fire and Forget, SH-60 Carrier Variant ASW Helicopter, Advanced V/STOL, Tanker/Transport/Bomber Training System, Advanced Tactical Fighter, Conventional Standoff Missile, Space Surveillance, Advanced Radar, THOR missile, LHDX, SM-3 missile, Manned Communication Relay Platform (ECX-TACAMO), Extremely High Frequency Satellite Communication and Advanced Military Landing System.

The total acquisition costs for these 20 new programs over the 5-year period (fiscal year 1983 through fiscal year 1987) is approximately \$14B in current year dollars.

MAJOR SYSTEM NEW START DISAPPROVAL AND RESTRUCTURE

Senator LEVIN. Which were disapproved and which were restructured? Provide a detailed justification in each case with those you restructured, describe how you did it and provide constant and current life cycle cost data for these after your actions.

Answer. The 155mm Fire and Forget, Space Surveillance, Advanced Radar and THOR missile were disapproved as fiscal year 1983 major system new start. The SH-60 Carrier Variant ASW Helicopter and Advanced V/STOL were restructured.

The separate Navy rotary wing and vertical short takeoff/landing (V/STOL) developments were combined and restructured so as to meet near term Marine assault transport and US Air Force search air rescue with off-the-shelf helicopters and to use service life extension program (SLEP) efforts on SH-3 helicopters assets for close in antisubmarine warfare. This restructuring was done to avoid duplication of effort in meeting recognized near term and far term requirements.

The THOR Standoff Jammer Suppression missile was disapproved because there was unnecessary duplication with other R. & D. programs. The Space Surveillance, 155mm Fire and Forget and Advanced Radar efforts were judged not mature enough to come out of the technology base phase.

The estimated total acquisition cost of the four disapproved programs over the 5-year period, fiscal year 1983-fiscal year 1987, was approximately \$1B in current year dollars. The 5-year period potential savings realized by restructuring two programs is approximately \$700M in current year dollars. While it is too early to make meaningful estimates on life cycle cost avoidance on the programs disapproved and restructured, it would certainly amount to several billion dollars.

WEAPON SYSTEM SUPPORT VISIBILITY

Senator LEVIN. On page 11 of your statement, you discuss efforts you have made to improve the visibility of program support funds. You selected certain program managers to provide to your office separate budget backup materials clearly showing all support funding required and budgeted for these selected programs.

Which programs received this special attention? Please provide for the record the special backup materials developed for these programs.

You state you expect these special visibility procedures to be applied to more programs in the future. To which programs?

Answer. An initial set of procedures to improve visibility of weapon system support funds was tried out in parallel with the fiscal year 1983 budget review on the F/A-18, AEGIS, AH-64 and M-1 tank. The purpose of the trial is to establish the feasibility and usefulness of information formats. The evaluation of procedures will take place over 2 years; however, the initial results are showing that many of the resources can be identified. The data elements in the current trial procedures include: spares, test equipment, training equipment, facilities, manuals, depot repair, contractor support and other support elements.

These special visibility procedures are planned to be applied to selected major weapon system acquisition programs (designated per DOD Directive 5000.1) during the several year period when their major initial support resources are being funded.

SUPPORT FUNDING ADEQUACY

Senator LEVIN. You state you have reviewed all programs to determine the adequacy of the support funding in each. Which major weapons programs were found to contain inadequate support funding, and by what amounts? Have you added these amounts to the fiscal year 1983 budget? If not, why not, and when will they be added to DOD budgets (by specific fiscal year)?

Answer. The support funding required for individual acquisition programs is input to the DOD budget by the responsible management office. The results of these budget inputs are reviewed as part of the normal budget review process by the management activities within the Services and Agencies. The visibility of support costs for selected weapon systems (i.e., those systems that are entering the operational inventory or transitioning) to the decision level in the Service and Agency Headquarters and in the Office of the Secretary of Defense is one of the objectives in Item No. 30 of the initiatives to improve the acquisition process. This initiative, once it is fully implemented will provide visibility into the resources required to achieve readiness levels with new systems and the impact of resource changes on these readiness levels. This detailed review is still in process.

REAL PROPERTY MAINTENANCE

Senator LEVIN. The \$460 million increase in Real Property Maintenance requested in the fiscal year 1982 Supplemental will bring the fiscal year 1982 Real Property Maintenance Program to \$4.1 billion, a 28 percent increase over fiscal year 1981. The Real Property Maintenance request then drops to \$3.7 billion in fiscal year 1983. What is the reason for this large infusion of funds in the Real Property Maintenance area in fiscal year 1982? Will the Services be able to carry out these large increases in fiscal year 1982?

Answer. The persistent underfunding of real property maintenance and repair has resulted in the progressive growth of a backlog for facilities, other than family housing, of \$4 billion DOD-wide. The Secretary of Defense is deeply concerned about the degree of plant deterioration which has been permitted, and has directed the improvement of working and living conditions for our military personnel, which includes reduction of this backlog. Of the approximately \$870 million planned funding

of backlog in fiscal year 1982 (including the \$460 million supplemental) at least \$125 million is for Europe, where inadequate conditions have a greater negative impact on a service member because of the language barrier and cultural shock limiting personal alternatives.

The Congress in its review of the fiscal year 1979 President's budget, established as an objective that the backlog of deferred facility maintenance be contained at the then projected fiscal year 1978 level of \$2.3 billion. The defense appropriations bill specifically stated that precluding further growth, expressed in current-year dollars, would reduce the backlog to a realistic management level. The Department has not been able to contain the growth at this level. This budget will enable the Department to make a significant stride toward the congressional containment objective.

Senator LEVIN. Why wouldn't it make more sense to level out the funding profile for Real Property Maintenance and postpone the \$460 million fiscal year 1982 Supplemental request until fiscal year 1983?

Answer. Funding for maintenance, repair and minor construction of real property will total approximately \$3.7 billion in fiscal year 1983. Although this reflects a decrease of \$400 million from the fiscal year 1982 proposed level of financing, it is \$500 million greater than that available and obligated in fiscal year 1981. The increased emphasis being placed by this administration to improve working and living conditions for the Service members will not only fully finance all recurring facility maintenance but will allow a significant decrease to the backlog of deferred maintenance. This reduction to deferred maintenance from the fiscal year 1981 level of \$3.9 billion is \$1.0 billion or approximately 25 percent. The congressional add-on to the fiscal year 1982 budget of \$217 million and an additional \$460 million which is included in a proposed fiscal year 1982 supplemental have contributed to this planned reduction.

It should be noted that congressional support for this effort is reflected in the congressionally directed backlog containment policy which mandated reduction of the backlog to the end fiscal year 1978 position of \$2.3 billion. Since we are at a \$4 billion level now, the additional \$460 million supplemental request for fiscal year 1982 will help to meet the goals established by Congress and the Secretary of Defense. Project designs are well underway for funds anticipated to become available by the end of this fiscal year.

Senator WARNER. Mr. Secretary, on behalf of myself and a number of my colleagues, we wish to compliment you on the very professional manner in which you presented your Department's budget request for fiscal year 1983.

Thank you.

Mr. CARLUCCI. Thank you, sir.

[Whereupon, at 1:08 p.m., the hearing was adjourned, to reconvene at the call of the Chair.]

UNITED STATES MILITARY POSTURE FOR FY 1983

Prepared By

THE ORGANIZATION OF THE JOINT CHIEFS OF STAFF

PREFACE

The purpose of this statement on the military posture of the United States is to augment and amplify reports and statements made by members of the Organization of the Joint Chiefs of Staff at Congressional hearings in support of the FY 1983 Defense Budget.

Chapter I describes the challenges to US and allied security interests in both global and regional contexts. The chapter highlights the growth of Soviet military power, provides an overview of factors affecting US security interests in regions of special importance, and identifies the major implications of the various challenges.

Chapter II addresses major components of the military balance between the United States and Soviet Union and their respective allies. The balance is discussed in terms of defense expenditures and strategic, theater nuclear, and conventional forces.

Chapter III highlights several topics of special military interest. The topics addressed are the readiness of US forces, mobilization and industrial preparedness, mobility, manpower, technological leadership, security assistance, arms limitation agreements and negotiations, and US participation in Sinai peacekeeping activities.

(U) Detailed descriptions of the Armed Forces of the United States and its allies are found in Appendix A. Appendix B addresses the military capabilities of the Soviet Union, Cuba, and People's Republic of China, as well as international terrorism.

CHAPTER I: CHALLENGES TO FREE WORLD SECURITY

THE REALITIES

US and allied security interests are challenged today by threats of unprecedented scope and urgency. Those threats derive from the sustained growth of Soviet military power and instabilities which confront the West in several regions of the underdeveloped world (Map 1-1).

The Soviet Union remains the only nation capable of seriously threatening the US by direct military attack. This capability has increased greatly during the past decade as the Soviet Union has continued to modernize its strategic nuclear forces. The Soviets have also significantly strengthened the general purpose forces which threaten US and allied interests in Europe and Asia, and have developed force projection capabilities for operations beyond the Soviet periphery. Together with its clients and surrogates, the Soviet Union is attempting to weaken the ties between the US and its allies and displace both US and allied influence in important areas of the Third World. Thus, Soviet military power and the inclination to project that power threaten the ability of the West to protect vital interests, assist in the peaceful resolution of Third World problems, and contain situations that could lead to global conflict.

Clearly, the most significant challenge to Western security would be an unconstrained US-Soviet conflict. US national security strategy must above all else aim to deter such conflict through the capability to deal decisively and effectively with threats around the world. US military forces and supporting capabilities, therefore,

must be designed to meet both regional demands and threats of global dimension.

Regional Instability and US Security Interests

The nations of the free world are deeply affected by increasing instability in underdeveloped regions. This instability, whether arising from indigenous sources or external instigation, increases the difficulty of dealing constructively with development problems, threatens the flow of vital resources to industrialized countries, and provides the Soviet Union with opportunities to expand its influence at Western expense. Instability is most prevalent in four regions of special strategic interest to the US and its allies — the Caribbean Basin, Southern Africa, Southeast Asia, and the area stretching from Libya to Pakistan. Each of these regions is confronted by social, economic, and political turmoil which defies easy solution and often leads to insurgency and intra-regional strife; each has natural resources crucial to the economic vitality of many nations; and each is susceptible to political, economic, or military exploitation by outside powers. Terrorism, the specter of nuclear proliferation, and aggressive actions by some states (particularly those armed and supported by external sources) are endemic to each of these areas — with possibly far reaching impacts on our national security.

The potential loss of US and allied influence in any of these regions must be viewed as a matter of significant strategic concern. This concern is especially great in the case of the Middle East, where Arabian Gulf countries

POTENTIAL SOURCES OF CONFLICT



produce more than half the oil imported around the globe. Any significant reduction in the export of this oil or other vital resources could have enormous economic and political effects on the free world.

Intraregional provocation and conflict take on importance because they pose considerable risks of embroiling neighboring nations as well as major powers outside the area. Such confrontations will continue, carrying with them special demands for conflict control, requirements to prevent exploitation by the Soviets and their clients, and the need to cope effectively with isolated hostile acts.

Roots and Consequences of Soviet Power

Both the causes and consequences of destabilizing factors in the international environment would pose serious — but perhaps manageable — problems in a world without potential for major power confrontation. The enormous growth of Soviet military power, however, presents a direct challenge to Western security and significantly complicates efforts to deal with regional instabilities. The growing Soviet capabilities have altered both the perceptions and reality of the military balance and greatly increased Soviet influence in world affairs. The powerful Soviet military establishment is the principal basis of the Soviet belief that the so-called "correlation of forces" — a mix of military, economic, political, and social forces — has shifted irreversibly in their favor.

Current Soviet military capabilities are the result of deliberate decisions based on a coherent strategic doctrine and pursued by the government at enormous economic cost. The Soviets have been willing to incur the drain on their economy partly because their perception of military danger to the USSR is fed by institutional pressures from within the Soviet bureaucracy. More importantly, however, the Soviets view military strength as essential to the attainment of their political objectives. Soviet military doctrine, which calls for forces structured to fight and win at any level of conflict, is based on a belief in the political efficacy of military power. The Soviets depend heavily on military capabilities to support their policies toward the NATO Alliance and to maintain the pressures essential for Warsaw Pact cohesion — as demonstrated in the case of Poland. Moscow's increasing willingness to sponsor surrogate activities in the Third World provides additional evidence of the political significance the Soviets attach to military power. Further, the direct military intervention in Afghanistan reflects a growing degree of Soviet confidence to operate in areas where they hold great geostrategic advantage.

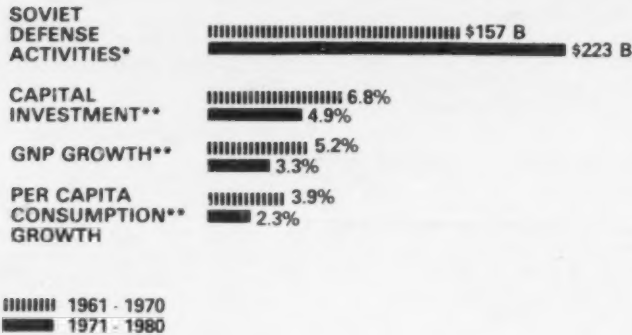
Guided by these attitudes toward the interrelationship of political objectives and military power, Soviet leaders have taken full advantage of their central control over the economic system to give continuing priority to military needs. The result, as shown in Chart I-1, has been a real increase in defense spending accompanied by declining rates of growth in gross national product (GNP), capital investment, and per capita consumption. Social and economic costs have been high, but so have the political dividends. The Soviet leaders know that their increased military power has permitted them to undertake politico-military initiatives that would have been too risky only a decade ago.

The Soviet economic system has serious limitations despite its ability to sustain the military buildup thus far. Resource constraints are severe and will become more so as economic growth continues to decline. The Soviet economy suffers from the excessive demands of defense spending (now estimated at 12-14 percent of GNP) and the inherent deficiencies of a rigid central planning system. These deficiencies include a long-term decline in productivity stemming from a relative inability to foster technological innovation in non-defense areas and a failure to motivate the work force. Confronted with these and other economic problems, Soviet leaders could eventually be forced to reduce the economic burden of their military programs.

At present there is no evidence to suggest that the Soviet leaders will willingly moderate their efforts to gain military advantage. Increased Soviet prestige and freedom of action have probably confirmed their belief in the tenets of their strategic approach and reinforced their justification of the sacrifices required to implement that approach. The basic nature of Soviet military doctrine is also unlikely to change. The Soviet view of the utility of clearly superior military forces is shared by political and military leaders alike and has deep historical roots. The Soviets are likely to continue to view the translation of military power into political gains as a long-term process, best promoted by persistent diplomatic efforts, covert action, and the steady development of military strength — supported by a pervasive program of propaganda and disinformation.

A central question for the 1980s is whether Moscow will be more inclined to confront the United States in a developing crisis. While the Soviets must still view a US-Soviet conflict as extremely hazardous, they may be more willing to accept the risks of confrontation, particularly where they have significant military and geostrategic advantages.

TRENDS IN SOVIET DEFENSE EXPENDITURES AND ECONOMIC PERFORMANCE



SOURCE: CIA

* REAL AVERAGE ANNUAL COSTS IN BILLIONS OF 1963 DOLLARS

** REAL AVERAGE ANNUAL RATES OF GROWTH (PERCENT)

CHART I - 1

The Need for Regional and Global Perspectives

The interaction of the threats to peace and stability posed by the realities of Soviet military power and intransigent Third World problems makes the 1980s a potentially explosive decade. Because the factors that give rise to threats to free world security are not transitory phenomena, the US and its allies clearly face a protracted period of challenge. Neither the Soviet Union nor its surrogates can be expected to abandon their efforts to exploit the vulnerabilities of the Third World or to extend their influence in areas vital to free world security.

Advances in Soviet power relative to the West have resulted not only from absolute increases in Soviet capability, but also the failure of the US and its allies to keep pace. The Western democracies have been far less willing to demand economic sacrifice in peacetime and more inclined to constrain defense spending during periods of reduced tension. The Soviets have shown that they regard Western restraint as an opportunity for advantage and an invitation to subvert US and allied interests worldwide. Because it is unlikely that internal economic and social pressures alone will force the Soviet leaders to adopt a less menacing foreign policy, they must be convinced that further investments in military power can provide no net and lasting advantage.

Confronted with varied challenges, the US and its allies must combine their resources to enhance global and regional stability; strengthen collective approaches to security; and promote economic, social, and political progress in unstable areas. The failure to do so will entail enormous costs for the West. A lack of capability to respond to aggression in one region without exposing unacceptable vulnerabilities in others can lead to more widespread conflict. Only a persistent allied response will be adequate to meet the enduring global threat.

If the industrialized democracies retain access to the resource-rich regions and mobilize their own considerable human and material potential, they will be able to meet the long-term threat. This potential, however, will have little effect unless allied efforts can be coordinated under a broad strategy. Allies must be willing to share with the US the costs and risks of turning back the worldwide challenge. The collective effort inevitably will be shaped by the diverse outlooks and interests of each nation, but this fact cannot be allowed to divert us from our common purpose.

Drawing strength from diversity is the task of leadership, a special responsibility of the United States. In recognition of its unique and indispensable role, the US has begun to reassert the leadership necessary to restore confidence and consensus among its allies and

friends. Increased attention and resources are now being devoted to the urgent task of rebuilding US military strength as a first step in restoring that leadership. If we continue to pursue our current initiatives, much will be done over the next 4-5 years to alleviate existing deficiencies in force structure, flexibility, and readiness. To be truly effective, these initiatives must be reinforced with similar commitments by US allies and be viewed as initial steps in a long-term program to overcome adverse trends in the military balance. The Soviet military advantage cannot be offset in a year or even a decade. The Soviet leaders are well aware of the superior economic and military potential available to the US and its allies, but based on our performance over the past two decades, they have reason to doubt whether the West will have the singleness of purpose and collective staying power for a protracted struggle.

The following sections provide an overview of US and allied interests, threats, and general strategic approaches in various regions of the world. While the areas addressed have unique characteristics and vulnerabilities which require assessment in a regional context, the interrelationship of events among these re-

gions demands that US security efforts in one area be designed and executed in light of potential effects on other regions. US national interests, international influences, and resource availability will often require the establishment of priorities in our military strategies for these regions.

The regional assessments open with a discussion of Western Europe and the Atlantic, where any conflict would likely result immediately in a direct US-Soviet confrontation. The region is also unique in that the nations of East and West are clearly arrayed in opposing alliances which represent collective interests, mutual defense arrangements, and — paradoxically — problems of alliance management that may divert governments from the task of meeting external threats. The other regions addressed are areas in which Western interests are threatened by major instabilities and possibilities for wider conflict.

WESTERN EUROPE, NATO, AND ATLANTIC

A secure Western Europe is of vital importance to the United States (Map I-2). The continued deployment of

WESTERN EUROPE, NATO AND THE WARSAW PACT



■ NATO

▨ WARSAW PACT

* MEMBERSHIP IN NATO PENDING

** DOES NOT PARTICIPATE IN INTEGRATED MILITARY STRUCTURE

AS OF 1 JANUARY 1982

MAP I-2

US forces in Europe is evidence of this nation's determination to maintain the independence and territorial integrity of all members of the Atlantic Alliance. Yet in spite of strong historical ties and mutual interests between North America and Western Europe, divergent views among the Allies have led to claims that the North Atlantic Treaty Organization (NATO) is facing a trans-Atlantic crisis. Disparate views among NATO nations are not uncommon, but the current differences are noteworthy because they coincide with unprecedented challenges to Western security and determined Soviet efforts to fragment the Alliance.

Although current differences within the Alliance should be viewed in the context of the stronger and

more lasting forces that bind us together, many factors complicate NATO relationships. Despite the economic power of the European nations, some Allies are failing to provide adequately for real growth in defense spending. Competing social demands, economic difficulties, and vocal minority opposition make it difficult for some European leaders to persuade their nations to assume a more equitable share of the collective responsibilities. The relative contributions of NATO and Warsaw Pact resources to their respective military capabilities are shown on Chart I-2.

As evidenced in Poland, the Warsaw Pact also has its own difficulties — but of a fundamentally different nature. Moscow has to devote significant military, polit-

NATO VS WARSAW PACT

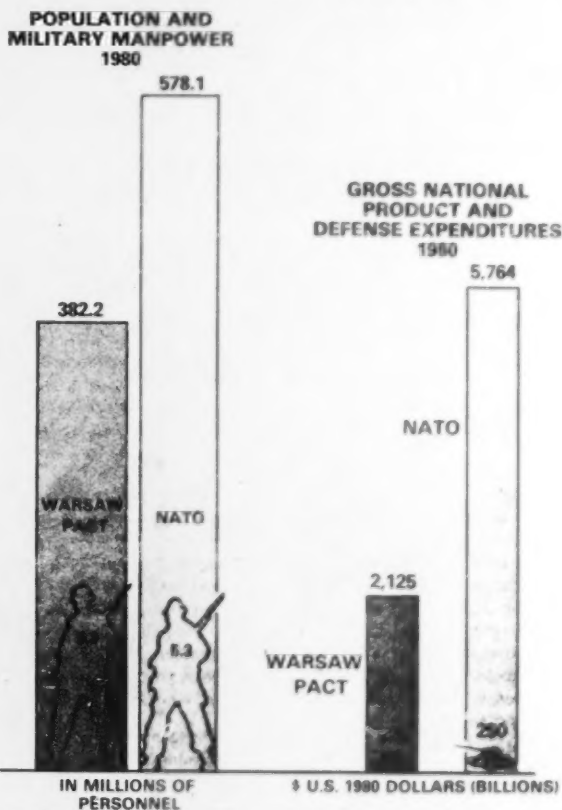


CHART I-2

ical, and economic resources to manage these difficulties and must question the reliability of some of its allies.

The security of Western Europe rests on the ability of the US and its Allies to maintain conventional, theater nuclear, and strategic nuclear forces sufficient for the full spectrum of deterrence and defense. The loss of clear US superiority at the strategic level has placed a greater burden on NATO general purpose force capabilities to maintain deterrence. The Alliance must remain firm in its commitment to modernize its theater nuclear weapons, while pursuing arms control, and improve its conventional deterrent capabilities.

NATO's Northern Region defenses are of continuing concern, particularly in light of improving Soviet air and naval forces opposite the region. Adequate warning of a Soviet attack would be crucial because land defenses in northern Europe depend heavily on regional reserve forces and outside reinforcements. NATO will be required to place special emphasis on adequate pre-positioned stocks and air defenses to reduce the vulnerability of arriving reinforcements.

NATO's posture in the Central Region is improving with the modernization of land and air combat forces; improvements to command, control and communications (C³) systems interoperability; and other measures. Deficiencies remain, however, especially in the areas of electronic warfare (EW); chemical warfare (CW); air defense; C³; and war reserve stocks of munitions, spare parts, and other supplies. NATO is also hindered by the malpositioning of some forward deployed units, a situation which dictates the need for timely warning if these forces are to reach their forward positions in time to meet an attack. While NATO is making some progress in rectifying these shortcomings, the Warsaw Pact is increasing its capability for either a reinforced or unreinforced attack in the Central Region.

NATO's ability to carry out its strategy in the Southern Region is hampered by persistent economic, political, and military difficulties among Alliance members. Although the anticipated entry of Spain into NATO should provide member countries increased operational flexibility and training opportunities, and otherwise strengthen the Southern Region, there will continue to be shortfalls in Southern Region military capabilities. CW and EW capabilities need improvement, and there is a shortage of war reserve stocks. Further, NATO naval capabilities in the region need to be improved to meet the threat of Soviet naval and air forces to the eastern Mediterranean.

The credibility of a conventional defense of Western Europe will rest on the capability to move reinforcements rapidly across Atlantic lines of communications

(LOCs). For this reason, the loss of a clear margin of maritime superiority over the Warsaw Pact is particularly troubling to NATO. NATO's reinforcement capability is also limited by shortfalls in the airlift and sealift needed to transport personnel and equipment to Europe.

In summary, NATO members continue to share a common interest in deterring Soviet aggression, but hold diverse views on how best to insure the security of Western Europe. Collectively these nations have immense wealth, but they are not uniformly able or willing to bear the increased burden of common defense. NATO military capabilities have begun to improve, particularly in the Central Region, but much more needs to be done. These circumstances clearly call for a revitalized Alliance, promoted by US leadership and invigorated by its example.

MIDDLE EAST AND SOUTHWEST ASIA

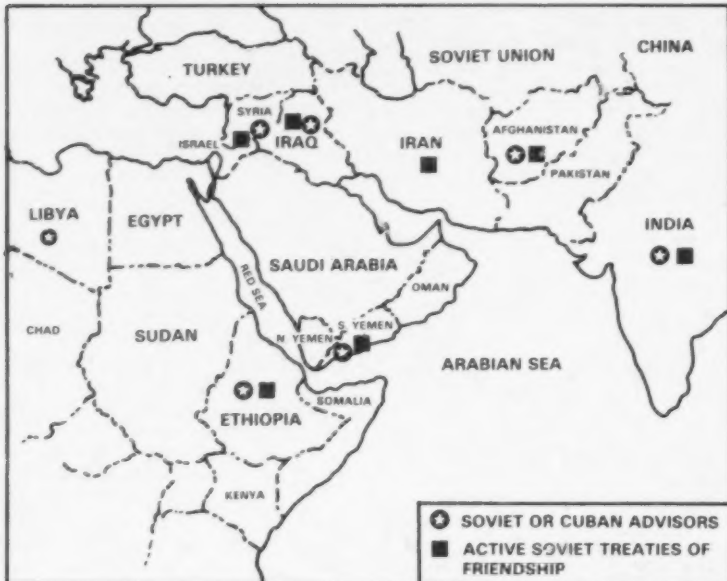
US interests in the Middle East and Southwest Asia focus largely, but not exclusively, on the region's oil reserves. The United States is determined to preclude disruption or hostile control of these vital resources and to limit the spread of Soviet influence in the area. Other US interests, important in their own right but bearing heavily on the security of energy resources, include peaceful resolution of the Arab-Israeli conflict and increased stability throughout the region (Map I-3).

The threats to US interests in the area are numerous, varied, and interlocking; tensions in the region are characteristically high. Many nations in the region are vulnerable to destabilizing pressures and prone to insurgencies, coups d'état, and civil wars. Internal instability can invite intervention by other nations, as events in Lebanon and other countries have shown. By invading Afghanistan, the Soviet Union demonstrated its willingness and ability to interfere by direct military means in the affairs of regional states.

The Arab-Israeli dispute and related crisis in Lebanon contribute greatly to regional tensions and to the potential for military involvement by external powers. Although the signing of the Egyptian-Israeli peace treaty reduced the probability of a major Arab-Israeli war, many problems at the root of the larger conflict remain. Even with a peace settlement, the potential for conflict will continue, as will opportunities for Soviet influence in the region. With a settlement of major issues, however, the potential for area-wide conflict will diminish.

Despite occasional overtures of friendship, quarrels and rivalries among Arab states will persist. Potential causes of conflict include stresses generated by the Arab-Israeli disagreement, realignment of traditional alliances, Islamic fundamentalist movements, and the in-

MIDDLE EAST AND SOUTHWEST ASIA



AS OF 1 JANUARY 1982

MAP I - 3

compatibility between revolutionary and traditional regimes. Countries especially prone to intra-Arab conflict include the two Yemens, Syria, Iraq, and Libya. Libya probably will continue its attempts to undermine efforts to achieve an Arab-Israeli accommodation, and is likely to contribute to attempts to overthrow Arab and non-Arab regimes which it opposes.

The situation in Iran continues to deteriorate. Political upheaval is seriously undermining the Iranian state and its ability to maintain internal and external security. The many pressure groups competing for influence in Iran complicate efforts to predict the future course of Iranian-US relations. However, Iran can be expected to foster serious social, economic, and political strains elsewhere in the region. Iran's ability and inclination to employ sizeable forces outside its own borders has diminished, but the promotion of Shia militance abroad is likely to remain a threat to traditional regimes in the Gulf.

The smaller Gulf sheikdoms also will have to deal with potentially disruptive political challenges from leftist labor factions, large foreign worker populations, and, in some cases, large Palestinian minorities.

US and allied interests are affected by instability within and among nations of the region. Arabian Gulf oil supplies are highly vulnerable to interruption by political action, insurgent violence, or open international conflict. Indeed, the Iraq-Iran war has established the precedent for attacks on oil facilities to undermine an opponent's economic infrastructure. Because of such threats, the US should support efforts to strengthen friendly regional states in their ability to deter and if necessary defend against attacks by hostile and unpredictable neighbors; the US should encourage similar action by its allies.

The most dangerous threat to US interests in the region arises from the proximity, power, and behavior of the Soviet Union. The Soviets have long sought to expand their influence in the area at Western expense. Direct or indirect control of Arabian Gulf oil would give the USSR great leverage over free world economies and help ameliorate possible long-term Soviet Bloc energy deficiencies. An increased presence in the area could provide the Soviets a greater capability to contain the forces of Islamic resurgence and ethnic self-determination that threaten to spill into the USSR.

Despite occasional setbacks, the Soviet Union has increased its political and military access to the region. Soviet involvement is highlighted by naval forces deployed in the Mediterranean and Indian Ocean, increased presence in South Yemen, invasion of Afghanistan, increased cooperation with Syria and Libya, and use of Cuban proxies in Ethiopia. Soviet forces located in the southern USSR (and perhaps those in Afghanistan) are capable of large-scale military operations in Iran.

The protection of US interests in the Middle East and Southwest Asia and the establishment of a strong regional security framework will require improved US military capabilities as well as diplomatic, economic, and security assistance initiatives. This framework must acknowledge regional concerns and provide for appropriate US responses. If the US is to be capable of deterring or defeating Soviet aggression in the area, regional and en route transit rights and support facilities will be required to deploy and sustain forces in a crisis. Progress has been made toward the development of regional cooperation to counter the Soviet threat.

Ongoing US efforts to promote peace and security in the Middle East and Southwest Asia include continued support of the Egyptian-Israeli peace process. Stability in the region should be increased by the deployment in the Sinai of the Multinational Force and Observers (MFO) in a peacekeeping and confidence-building role. This international organization, with significant US military and civilian participation, will be in position before the remainder of the Sinai is returned to Egyptian control on 25 April 1982.

Progress in the development of US capabilities for operations in Southwest Asia is reflected in the continuing evolution of the Rapid Deployment Joint Task Force (RDJTF). The RDJTF Headquarters was established in 1980 as a subordinate element of US Readiness Command, with the responsibility to plan for contingencies, conduct joint training and exercises, and prepare for and implement deployment as a combat command. Planning and preparation have proceeded rapidly. On 1 October 1981 the RDJTF, which reports directly to the National Command Authorities (NCA) through the Joint Chiefs of Staff, was established as a separate joint task force as an interim step in the transition to a full unified command. Because of the great range of possible threats in the Arabian Gulf region, prudent military planning requires the capability to deploy and employ a balanced and flexible US projection force that combines the unique capabilities of each of the Services.

A number of exercises have been conducted to evaluate progress in the development of the RDJTF and

provide operational experience in its employment. Operation BRIGHT STAR 82, conducted in October-November 1981, was the largest US exercise ever conducted in the Southwest Asia region. The exercise involved forces deployed in four countries of the region under the command and control of the Commander, RDJTF. The continuing development of the RDJTF signifies the depth of the US commitment to the defense of its interests in Southwest Asia.

AFRICA

Africa has now assumed a more prominent place in US security policy (Map 1-4). Africa is the principal free world source of gold and several other minerals important to US, West European, and Japanese industries. Countries south of the Sahara hold between 80 and 97 percent of the free world's reserves of chromite, industrial diamonds, manganese, vanadium, and the platinum-group metals. In 1980, Africa produced 10 percent of the world's oil, including about 25 percent of that imported by the US and Western Europe.

Africa also has great geostrategic importance, especially in view of Western and Japanese dependence on Arabian Gulf oil. Northeast Africa affords both the US and the USSR military access to the Middle East, and the continent is circumscribed by vital sea lines of communications (SLOCs). In 1980, about 50 percent of the Arabian Gulf oil shipments passed around the Cape of Good Hope; hostile forces anywhere on the African periphery could threaten the Western oil lifeline.

Threats to US security interests in Africa fall into three categories. First are the conflicts among African countries that would exist even if there were no outside support or instigation. Steeped in religious, tribal, and racial differences that spill across boundaries imposed during colonial times, these disputes involve nations in several parts of the continent. None of these conflicts, however, is a purely regional matter. In Africa, as elsewhere, the Soviet Union attempts to exploit indigenous strife for its own strategic ends.

The rapid expansion of Soviet influence in Africa during the last decade constitutes the second general threat to US and Western interests in the region. The Soviets exploit African instabilities primarily through low cost arms sales, Soviet military advisors, limited economic and internal security aid, and sponsorship of Cuban and East European proxies. Cuba alone maintains more than 22,000 military personnel in Africa, including large numbers of combat troops. Marxist regimes in Ethiopia, Angola, and Mozambique depend heavily on support by the Soviets or their surrogates,

AFRICA



AS OF 1 JANUARY 1982

MAP I - 4

and in turn provide footholds from which the Soviet Bloc may attempt to deny military access and resources critical to the West.

To a large extent, Soviet interests in Africa coincide with the aims and methods of Libyan adventurism, the third major threat to US interests in the area. Motivated by Qadhafi's radical leadership and heavily armed by the Soviet Union, Libya seeks to establish an Islamic Empire in North Africa and has intervened militarily in other African countries, most recently in Chad. In addition, Libya has fomented insurgency throughout the continent, supported terrorism on a global scale, and attempted to deny freedom of the seas in the Gulf of Sidra.

These complex and interwoven threats constitute a serious challenge to US security. The US response to internal instability must center on an understanding of each nation and a careful blending of security assistance with economic, political, and technical support. US efforts to promote internal stability and economic self-sufficiency will help to limit Soviet influence by re-

ducing African dependence on Soviet aid. The United States must work in concert with friends and allies to develop consistent and mutually supporting policies designed to weaken incentives for cooperation with the Soviet Union and other hostile nations, create more effective support of US security objectives, and promote Africa's economic and social development.

PACIFIC AND EAST ASIA

The United States has many enduring interests in the East Asia and Pacific Ocean area. The US now conducts more trade with countries of this region than with Western Europe, is committed by treaty or conviction to the defense of several Pacific and Asian allies, and maintains a deep interest in stability and progress throughout the whole area.

As in other regions, challenges to stability and US interests arise from diverse causes. Some causes of instability are rooted in economic underdevelopment and social turmoil, some in nationalistic aspirations, and others in the aggressive designs of hostile nations. The

main threats to peace and stability in the region are posed by the Soviet Union's expanding military power and access, North Korea's military buildup and aggressive posture, and Vietnam's aggression (Map I-5).

Soviet military capabilities in the Pacific and East Asia are improving rapidly. The Pacific Fleet is now the largest Soviet fleet and provides the USSR an improved warfighting capability and the potential for added political influence. In addition, Soviet naval aviation capabilities present an increased threat to the SLOCs in the region, and Soviet air and ground units in the Eastern USSR are being strengthened and modernized. The Soviets are also attempting to increase their influence and military support base in Southeast Asia. For large amounts of economic and military assistance, the Socialist Republic of Vietnam (SRV) has granted the So-

viets use of important air and naval bases. These bases provide the Soviets direct access to vital SLOCs and support for intelligence collection activities that significantly add to US and allied security concerns.

The strategic importance of the Korean Peninsula continues to justify US commitments to the security of the Republic of Korea (ROK). In meeting these commitments for more than 30 years, the US has demonstrated its resolve to both allies and potential enemies. The economic progress achieved by the ROK is additional evidence of the positive effects of ROK-US cooperation in security and economic affairs.

Although the ROK provides the bulk of the military capabilities for its own defense, strong US combat and logistic support is still needed. North Korean military

EAST ASIA AND THE PACIFIC



AS OF 1 JANUARY 1982

MAP I - 5

capabilities continue to grow, and there is no evidence that North Korea has abandoned its objective of reuniting the North and South on its own terms. The commitment to ROK security signalled by the US military presence has been an important factor in maintaining peace on the peninsula since 1953. There is a continuing need to upgrade the capabilities of US forces in Korea to counter the North Korean buildup.

The SRV continues to employ military force against neighboring countries in its pursuit of hegemony in Southeast Asia. The SRV is expected to continue to occupy Kampuchea and maintain a dominant influence over Laos. Border incursions, subversion, and infiltration are likely to keep tensions high in the border areas. The United States remains committed to the Manila Pact and support of Thailand against external aggression.

The United States regards China as an increasingly important nation — one that indirectly contributes to US global and regional security objectives. Essentially a regional power, China seeks a closer relationship with the US and the West to help offset the threat of Soviet expansionism, acquire modern technology to assist in the development of its industrial production base, and meet its long-term military modernization needs. By continuing to develop security and economic relationships with China, the US hopes to encourage an increasing Chinese commitment to regional stability.

Japan continues to play a vital role in maintaining stability in the Asian-Pacific region in partnership with the United States. Japanese cooperation, an essential component of US strategy for Asia, has been evident in bilateral defense planning, cost-sharing programs, and support for US forces based in Japan. Japanese overseas economic assistance programs provide additional support to regional stability. The US-Japan defense relationship has been characterized by frank exchanges of views on security issues of mutual concern. To further bilateral cooperation, particularly in view of recent Soviet activities in the region and increased US concerns in Southwest Asia and the Indian Ocean, it is essential that Japan increase its defense capabilities.

US access to Philippine bases is essential for maintaining the military balance in Southeast Asia. The bases provide key transshipment points for US logistic resupply efforts to the Western Pacific and Indian Ocean and are important to the maintenance of US military access to the region. Implementation of the 1979 Amendment to the Military Bases Agreement has gone smoothly and the US continues to enjoy unhampered use of the facilities.

In addition to continuing its long-standing defense ties with the Philippines and Thailand, the US seeks to

strengthen the self-defense capabilities of Indonesia, Malaysia, and Singapore, and encourage collective contributions by these countries to regional stability.

Australia and New Zealand continue to provide a stabilizing presence in the region. Their active roles as parties to the Australia-New Zealand-US (ANZUS) Treaty, economic ties and political rapport with friendly nations of Southeast Asia, and training and economic assistance to the newly independent island nations of the Southwest Pacific help to counter the growing Soviet presence in the area. Both countries are attempting to modernize their armed forces without placing great burdens on their economies. Australia's firm support for US policies in Southwest Asia has been reflected by increased naval deployments and aviation patrols in the Indian Ocean.

Although steps are being taken to improve the US force posture in the Pacific, these efforts have not kept pace with the growth of Soviet power in the region. The resulting increase in threats to US interests in the area require continued US and allied force improvements and strengthened US security relationships in the area.

WESTERN HEMISPHERE

The defense of North America is this nation's primary security concern. Since World War II, the United States has relied on a strategy that calls for defense of the Western Hemisphere and forward defense against potential adversaries in other areas. Essentially, defense of the Western Hemisphere has meant that the US would maintain strategic nuclear deterrence, develop closer relations with Canada and Mexico, and foster collective security arrangements among Latin American countries. US strategy has presupposed a friendly and supportive Latin America, which in time of conflict would not require the employment of substantial US forces.

It is becoming increasingly clear that a secure hemisphere is no longer a foregone conclusion and that the US must now play a more active and enlightened role in hemispheric affairs. Specifically, the US must continue to build on interests shared with Canada and Mexico, while viewing Latin America not as a Third World area removed from the traditional focus of US strategy, but as a contiguous region whose future bears directly on the security of the hemisphere as a whole.

Appropriately, the US maintains a more extensive mutual defense relationship with Canada than with any other country. Among the factors that underpin this special relationship are the sharing of a lengthy border, a high degree of economic interdependence, Canada's location between the US and the USSR, and a common status as the only two non-European members of

NATO. Since the 1941 Hyde Park Agreement, Canada and the US have cooperated in a wide range of defense production efforts. These efforts have included measures to strengthen and integrate the North American defense industrial base, encourage the exchange of data and technology, and provide for joint industrial mobilization planning.

Combined US-Canadian defense efforts are equally extensive. The United States and Canada cooperate on security policy matters as well as detailed planning for combined operations. The most prominent example of combined efforts is the North American Aerospace Defense Command (NORAD) established in 1958. NORAD is an integrated bilateral military command which controls US and Canadian air defense forces and provides early warning and attack assessment of air and missile attacks on North America.

While US-Canadian relations provide extensive security to the north, US security concerns in Latin America have increased greatly in recent years. Growing political and economic instability, increasing Soviet and Cuban military activism, expanding acquisition of arms by Nicaragua, and mounting anti-US sentiments in some countries tend to reduce US influence and undermine US security interests in the south. At the same time, the

US and its European allies have become more dependent on the region's resources and on the SLOCs over which they move. In addition, many Latin American countries, especially emerging regional economic powers, have an increased ability and incentive to define and pursue their own security interests. These trends have caused the US to reexamine its approach to regional security.

The most immediate and serious threats to US security interests in Latin America are concentrated in the Caribbean Basin (Map I-6). The security of the Basin is of vital importance to the United States because of its proximity and our many economic, strategic, and cultural ties with Caribbean nations. Moreover, SLOCs in the area provide transport for some 60 percent of US crude oil and 70 percent of US refined oil imports, and are essential to the successful defense of Europe. In the event of war, a significant number of the initial US reinforcements and supplies for NATO would sail from Gulf ports.

Cuba and the Soviet Union constitute the greatest threat to US security in the Caribbean Basin. Armed and supported economically by the Soviet Union, Cuba serves as a springboard for efforts to spread insurgency and revolution, as well as a base from which to project Soviet power into the Western Hemisphere in wartime.



The growing severity of the threat posed by the Soviet-Cuban relationship is highlighted by the fact that the supply of Soviet arms to Cuba has increased dramatically in the past year (Chart I-3). Because of its strategic position adjacent to key SLOCs in the region, Cuba would pose a significant threat to US crisis response capabilities.

Threats to regional stability are further compounded by increased Soviet-Cuban ties to Nicaragua and combined efforts to instigate and support violence in Central America. The major struggle now centers in El Salvador, where radical leftist insurgents are receiving external aid and encouragement, largely from Cuba and Nicaragua. The introduction of Soviet weapons and Cuban military personnel into Nicaragua has made that country the strongest military power in Central America. The Cuban-Nicaraguan military connection has created a destabilizing influence and increased Cuban-Soviet power projection capabilities in this critical region.

Other areas of Latin America are also important to US and allied security. For instance, the SLOCs passing

through the South Atlantic carry nearly half of the US crude oil imports and about two-thirds of Western Europe's petroleum imports. These same SLOCs also carry from 20 to 85 percent of various strategic minerals imported by the US from Southern Africa. Regional powers such as Brazil and Argentina depend heavily on the South Atlantic SLOCs, and therefore share great interest in protecting them.

To protect its security interests in Latin America, the US must revitalize its relations with nations in the area. These relationships must be built upon converging interests and demonstrate that the US is a reliable and capable security partner. Peacetime military involvement should be increased through greater military presence, increased security assistance, and expanded military-to-military contacts. At the same time, the US must assist countries in the region in efforts to improve socio-economic conditions as an essential contribution to stability and progress.

SOVIET MILITARY DELIVERIES TO CUBA

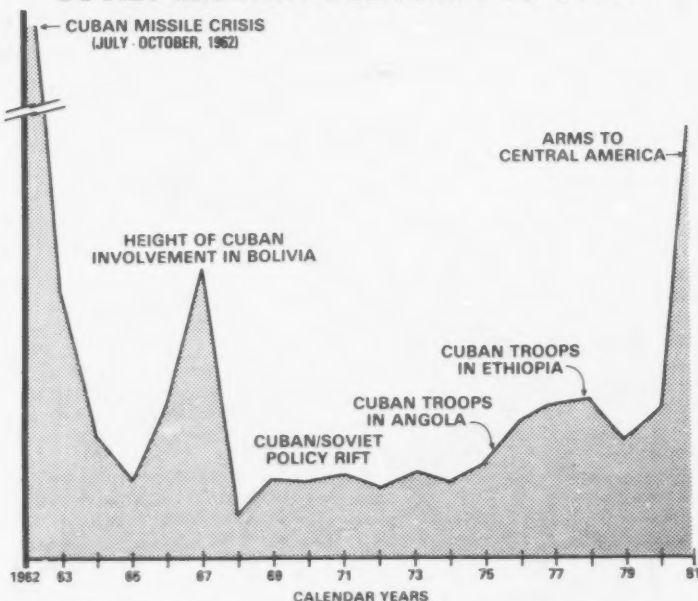


CHART I-3

IMPLICATIONS FOR US STRATEGY AND FORCES

US and allied security risks have been greatly heightened by the continuing buildup of Soviet military power and the increasing complexity of regional threats. Given these trends, it is more important than ever that US military strategy be designed to deter or defeat aggression at all levels of conflict. The defense posture required to achieve these fundamental security objectives must include the full range of force capabilities necessary for strategic nuclear warfare, a major NATO-Warsaw Pact confrontation, and those lower levels of regional conflict which, if not controlled, could lead to more serious and demanding global war.

The consequences of failing to deter strategic nuclear warfare or a full scale attack on NATO are more obvious than those of regional conflict. The growth of Soviet capabilities to project military power beyond their own periphery to other regions of US strategic concern, however, greatly compounds the risk of widespread conflict growing out of regional confrontations. Such threats can only be met by the capability to respond rapidly with sufficient force and to sustain operations as long as necessary. The steady expansion and upgrading of the Soviet conventional forces and war-supporting industrial base, coupled with the loss of US nuclear superiority, make improvement of the US and allied conventional capabilities essential. The requirement for conventional defense demands responsive national capabilities for manpower and industrial mobilization, and ready forces capable of containing conflict until additional resources can be mobilized.

US allies must realize that the US alone cannot bear the burden of defense necessary to implement a global strategy against the Soviet Union and its widespread network of allies, clients, and surrogates. Although the US will remain unique in its ability to project large forces on a global scale, the more prosperous allies must be encouraged to assume a greater share of defense responsibilities in their own regions and in other areas where they have vital interests. Less prosperous allies and friends must meet their responsibilities with the help of increased security assistance from more affluent nations. Allied military cooperation will take on ever greater urgency as the need for combined commitments, planning, and operations in areas of common interest continues to grow.

The overall allied strategic approach must also include nonmilitary aspects of national power. While the US and its allies must have the military capability to meet armed threats to their interests from any source, they must also use their great economic and diplomatic

resources to full advantage in efforts to relieve the causes of instability and frustrate Soviet strategy.

The US is determined to do its part to reduce mutual security risks. Recognizing that the Soviet Union and other adversaries have capitalized on a long period of Western restraint, the US has embarked energetically on the rebuilding of its own military capabilities. Plans and programs to bolster US military strength must be designed with long-term needs in mind because it will take years of steady support for US and allied efforts to reverse current trends, restore the global military balance, and reduce risks to an acceptable level. At the same time, plans and programs must provide for increased readiness and sustainability of existing forces to meet current threats.

Current US initiatives address the full range of required forces and supporting capabilities. As a matter of particular urgency, the US has begun to redress the growing strategic nuclear imbalance and to counter adverse trends which have contributed greatly to the declining security and confidence of the West. Recent decisions to modernize US strategic offensive forces, strengthen strategic defense, and improve command and control capabilities must be implemented without further delay.

In addition, the US must follow through on initiatives to assure that its general purpose forces are strong, modern, ready, and well positioned for potential employment. The United States will continue to support its commitments in the traditional theaters of Europe and Northeast Asia, but it also must be able to project power quickly and effectively to areas where it presently has little or no forward-deployed capability. US power projection requirements demand US forces capable of rapid insertion into areas in which US interests are threatened, by forcible entry if necessary. We must, therefore, improve the rapid response capabilities of those air and ground forces not normally forward deployed. Further, the need to reinforce and sustain forward deployed forces requires special emphasis on improved mobility resources and clear US maritime superiority. The threat posed to vital SLOCs by Soviet naval and long-range air forces must be met through the increased capabilities of our own and allied naval and air forces.

The following chapter will make clear the discrepancies between US strategic requirements and existing capabilities in both the overall US-Soviet military balance and in the regions of most significant US interest. The regional balances must be viewed in the context of actual and potential allied strength on both sides and the need for equitable burden sharing by the US and its allies.

CHAPTER II: THE MILITARY BALANCE

INTRODUCTION

The balance in strategic and general purpose forces is fundamental to US and allied security. Adverse trends in either of these categories lessens assurance that aggression against Western interests can be deterred, or defeated if necessary, and increases the risks of coercion and intimidation short of armed conflict.

For more than two decades the Soviet Union has pursued the steady expansion and modernization of its military forces. In addition, the Soviets have strengthened other Warsaw Pact forces and equipped Soviet clients and surrogates outside Europe as well. The failure of the US and its allies to keep pace has resulted in a growing imbalance in strategic and general purpose force capabilities.

The assessment of the military balance is a complex process, involving quantitative analyses as well as judgments concerning such intangible and unquantifiable factors as leadership, training, and morale. Static force measurements provide useful comparisons of capabilities, but cannot reflect the interaction of forces in war. Whenever possible, static force comparisons should be complemented by dynamic analyses that attempt to incorporate some of the complexities and variables of actual combat.

US AND SOVIET DEFENSE EXPENDITURES

Because military capability depends to a great degree on the level of resources devoted to producing it, comparisons of US and Soviet defense expenditures provide a rough, but useful, measure of the US-Soviet military balance. In addition, trends in relative defense spending, especially those of the past decade, provide an indication of the required level of future US defense efforts. Comparisons of military investment — that portion of spending allocated to weapons system procurement; facility construction; and research, development, and test and evaluation (RDT&E) — are of special importance because a prolonged disparity in military investment leads eventually to disparities in fielded military capabilities.

Limitations

Comparisons of defense expenditures are based on estimates that are somewhat uncertain. Although US analysts have made significant progress in estimating what the Soviets devote to their military establishment, the quality of information varies greatly according to the

category of Soviet efforts considered. For example, estimates of Soviet personnel activities are more reliable than estimates for procurement or operations. Estimates on research and development tend to be the least reliable since they focus on less quantifiable measures of comparison. Differences in the priorities for defense resources in societies as dissimilar as the US and the USSR also affect the validity of military expenditure comparisons. The ruble defense spending figures published in Moscow are far below actual Soviet expenditures, but US estimates of Soviet spending in rubles do assist in understanding the resource allocation choices made by the Soviet leadership. Most comparisons, however, are made by estimating the value of Soviet defense activities in terms of dollars. Dollar estimates of Soviet activities tend to represent what it would cost for the US to develop and procure Soviet military equipment and operate it as the Soviets do.

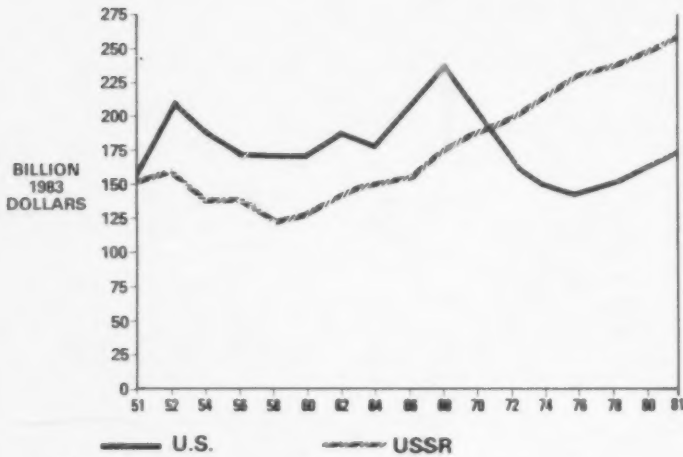
Comparisons Since 1970

Prior to 1970, US defense expenditures exceeded those of the Soviets. During the period 1971-1981, however, the cumulative dollar cost of Soviet defense activities has exceeded that of the US by more than 40 percent. Chart II-1 shows that as the US was winding down spending related to Vietnam, the Soviets maintained a trend of steady real growth of about three percent per year. This Soviet trend began in 1969 and is expected to continue.

Mission Comparisons

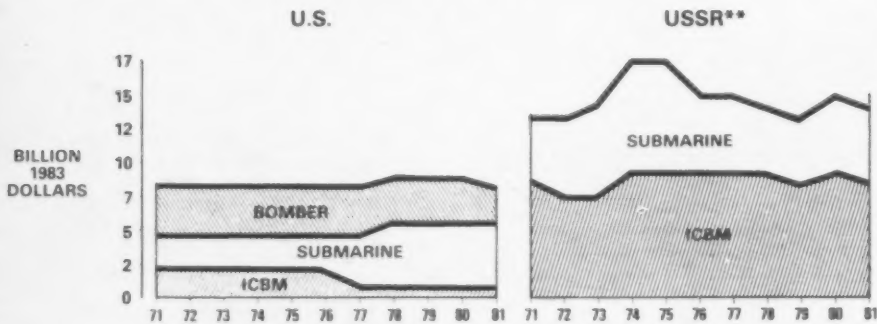
Comparisons of US and Soviet efforts by mission category provide a rough indication of relative emphasis on similar military activities. For instance, the dollar cost for Soviet strategic offensive force activities was nearly twice that of the US during the 1971-1981 period (Chart II-2). Soviet emphasis on intercontinental ballistic missiles (ICBMs) is readily apparent, and despite US emphasis on submarine-launched ballistic missiles (SLBMs), the Soviets have led in that category as well. It is only in the long-range bomber component that US activity has exceeded Soviet efforts. During the 1970s, Soviet activity for strategic defensive purposes also outpaced that of the US.

Chart II-3 shows the distribution by major mission categories for the US and the USSR. Support costs (expenditures for operation and maintenance of military facilities, logistic activities, intelligence programs, and basic training for recruits) continue to receive the largest share of US spending; general purpose forces (GPF) receive the largest share of Soviet defense efforts. For

U.S. AND SOVIET DEFENSE ACTIVITIES*

* U.S. OUTLAYS AND ESTIMATED DOLLAR COSTS OF SOVIET ACTIVITIES

CHART II - 1

INTERCONTINENTAL ATTACK FORCES*

* U.S. OUTLAYS AND ESTIMATED DOLLAR COSTS OF SOVIET ACTIVITIES; DOES NOT INCLUDE ROT&E COSTS

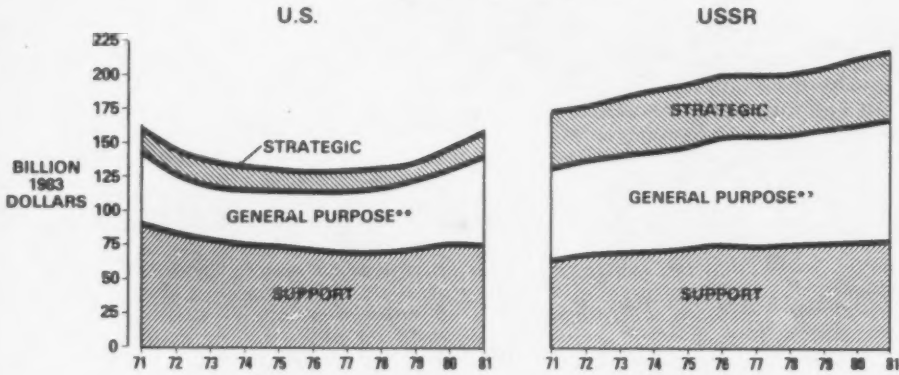
** SOVIET BOMBER COSTS (EXCLUDING BACKFIRE) WERE MINIMAL FOR THE 1971-81 PERIOD

CHART II - 2

both nations, GPF receive a larger share of resources than strategic forces. Chart II-4 shows that Soviet GPF activities exceeded those of the US by almost 50 percent during 1971-1981. While the US has devoted more

resources to mobility and tactical air forces, the Soviets have devoted more to naval forces and approximately three times as much to land forces.

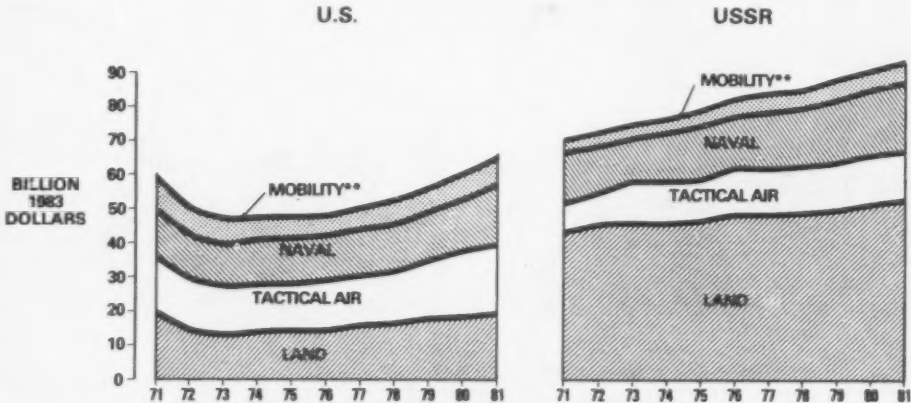
MAJOR MISSIONS*



* U.S. OUTLAYS AND ESTIMATED DOLLAR COSTS OF SOVIET ACTIVITIES; DOES NOT INCLUDE ROT&E COSTS
 ** GPF DATA DOES NOT INCLUDE MOBILITY COSTS FOR THE STRATEGIC AND SUPPORT MISSIONS

CHART II - 3

GENERAL PURPOSE FORCES*



* U.S. OUTLAYS AND ESTIMATED DOLLAR COSTS OF SOVIET ACTIVITIES; DOES NOT INCLUDE ROT&E COSTS
 ** INCLUDES COSTS FOR STRATEGIC, SUPPORT, AND GPF MISSIONS

CHART II - 4

Functional Comparisons

A second way to view total spending comparisons is illustrated in Chart II-5, which shows how resources are distributed among major functional categories — operations (activities related to force expenditures and personnel costs) and investment (including RDT&E). While Soviet operational and investment activities both exceeded those of the US during the past decade, the Soviet investment advantage was especially large. By 1976, Soviet investment efforts were double the corresponding US efforts. Although the investment gap appears to be narrowing, Soviet investment activities still exceed those of the US by more than 70 percent. The differential between US and Soviet military investment is of special concern since investment spending has more of a cumulative effect. This effect is clearly evident in the Soviet Union, where, as a rule, older systems are not phased out as new systems are added to the inventory. Thus, the investment disparity has directly contributed to the current asymmetry in US and Soviet military capability. Considering the RDT&E portion of investment activities alone, US outlays during the past decade remained relatively constant whereas Soviet RDT&E costs more than doubled from 1971-1981. For the period as a whole, the estimated dollar costs of Soviet RDT&E activities were more than 50 percent larger than corresponding US outlays. This increasing effort in

RDT&E activities during the past decade has enabled the Soviets to offset long-standing US qualitative advantages in all mission categories.

Effect of Allies

Evaluation of the overall defense investment balance should reflect the allied defense contributions for both sides. In general, NATO Allies add substantially to the Western effort, both in terms of general defense activity and investment. However, in evaluating contributions of US Allies to the military balance, two considerations should be noted. First, the preponderance of Allied spending is for general purpose forces; solution of the strategic force imbalance problem is thus largely a US responsibility. Second, largely because the forces and production capabilities of the Warsaw Pact nations are more highly standardized, spending by the US and its NATO Allies adds less to the common defense than an equal amount of spending by the Soviet Union and its allies adds to the Warsaw Pact. Under the assumption that allied investments are equally efficient for both NATO and the Warsaw Pact, Chart II-6 shows that in 1981 Pact investment efforts exceeded NATO efforts by about 20 percent. Owing to the less efficient nature of NATO spending, however, the investment gap between NATO and the Warsaw Pact is actually somewhat greater than portrayed in the chart.

MILITARY RESOURCES*

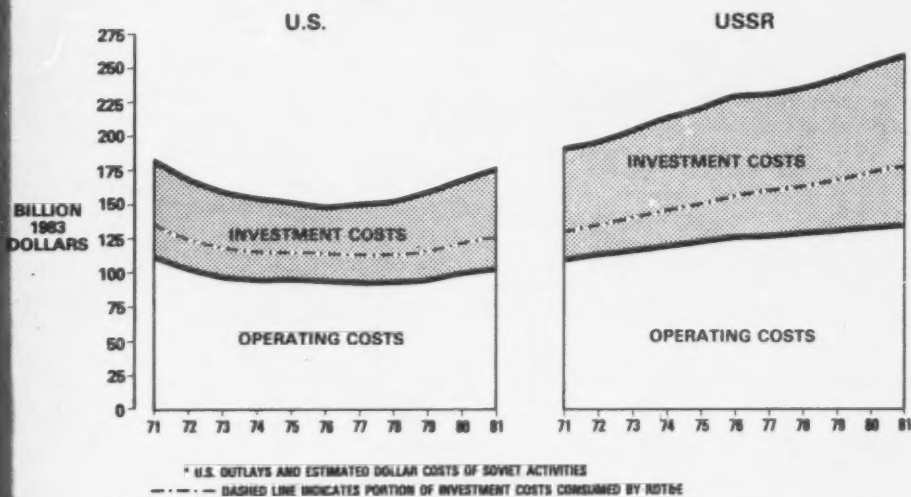


CHART II - 5

NATO & WARSAW PACT MILITARY INVESTMENT*

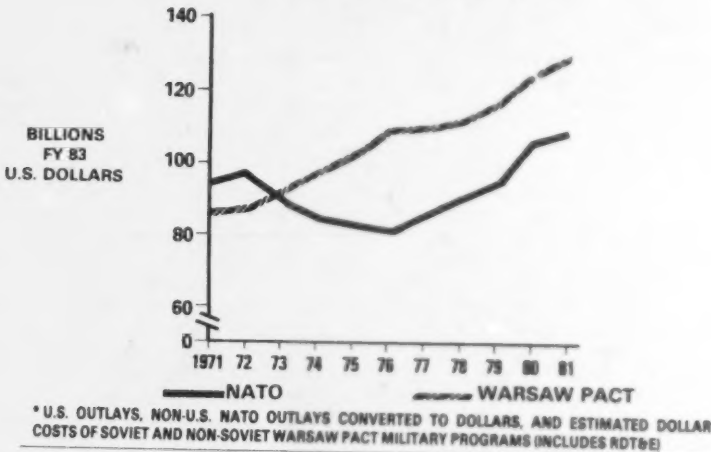


CHART II - 6

Summary

The continuity in Soviet defense planning and momentum of Soviet defense production suggests that future trends in Soviet military expenditures are unlikely to deviate substantially from past trends. The degree to which Soviet leadership will continue to increase military investment at the expense of improving the quality of life for its people is unknown. In spite of economic difficulties, there are no indications that Soviet allocation priorities will change. Soviet military expenditures are expected to continue to increase at an annual rate of three to four percent, compared to five to seven percent for the US. Collectively, the West has the capability to meet the Soviet investment challenge and reverse these trends. The current imbalance in strategic, theater nuclear, and conventional forces reflects the urgency of a national commitment to meet the Soviet challenge.

STRATEGIC FORCES

The prime objective of US strategic forces and supporting C³ is deterrence of Soviet nuclear attack on the US and its allies. Deterrence depends on the assured capability and manifest will to inflict damage on the Soviet Union disproportionate to any goals that rational Soviet leaders might hope to achieve. Any US strategic retaliation must be controlled by and responsive to the NCA, tailored to the nature of the Soviet attack, focus-

ed on Soviet values, and inevitably effective. Assured strategic C³ connectivity across the spectrum of conflict is essential for NCA control of US strategic forces.

Strategic Offensive Forces

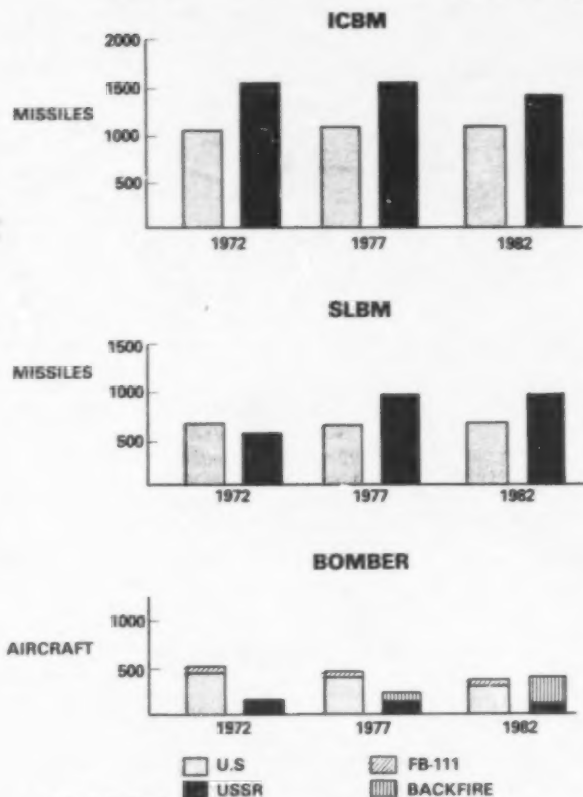
US strategic offensive forces consist of a TRIAD of ICBMs, SLBMs, and intercontinental manned bombers equipped with gravity weapons and air-launched missiles. The TRIAD of mutually supporting systems provides a mix of force characteristics for appropriate response to a number of possible Soviet attacks, complicates Soviet attack and defense planning, and insures the effectiveness of a US nuclear response.

Soviet intercontinental nuclear forces also consist of ICBMs, SLBMs, and manned bombers, but the Soviets currently place greatest emphasis on ICBMs. The Soviets have steadily increased the capability of these forces until they now exceed US forces in several measures of capability (Chart II-7 depicts the trends in numbers of US and Soviet long-range nuclear systems). The US no longer enjoys strategic nuclear superiority, and the overall effectiveness of our retaliatory capability has become increasingly uncertain.

Sources of Deterrent Uncertainty

The increased uncertainty in the effectiveness of the US strategic deterrent has resulted from Soviet stra-

LONG-RANGE NUCLEAR SYSTEMS*



AS OF 1 JANUARY 1982

CHART II - 7

tegic force modernization and delays and deferrals of US modernization programs. Since the early 1960s, the Soviets have placed heavy sustained emphasis on improving strategic force capabilities. This emphasis corresponds to Soviet doctrinal writings, which assign little importance to the concept of deterrence and comparisons of balance such as are common in the West. Soviet doctrine talks instead of sufficiency to achieve objectives by the possession of credible warfighting capabilities. To gain strategic sufficiency, the Soviets have focused primarily on modernizing their ICBM forces by deployment of new systems and by block modifications to deployed systems. These initiatives have yielded more Soviet weapons per missile, greater throw-weight, improved C³, and improved weapon accuracy. As a

result of these improvements — and in line with Soviet doctrinal emphasis on mass and surprise — Soviet ICBMs are now capable of destroying time-urgent targets in an initial attack.

The Soviets are also continuing to strengthen the SLBM leg of their forces. The new TYPHOON-class submarine is undergoing initial sea trials and should soon join a fleet of DELTA- and YANKEE-class ships which already far outnumber US ballistic missile submarines. The TYPHOON-class submarine, which exceeds the US TRIDENT-class in size and may rival it in technology, should become fully operational in the mid-1980s. Like DELTA, TYPHOON will provide the Soviets with the same operational advances the US will make with TRI-

DENT — longer range SLBMs, expanded patrol areas, shorter travel distances to patrol stations, and the capability to launch against targets in the US from home waters.

For their bomber force, the Soviets have retained the BEAR and BISON while continuing to add BACKFIRE. Although apparently designed primarily for peripheral missions, BACKFIRE has sufficient range to attack the US by employing either aerial refueling or post-strike recovery in the Western Hemisphere. Long-range air-to-surface missiles (ASMs) have been deployed, and a new bomber and a new tanker are projected for the 1980s.

For a variety of reasons, US strategic force modernization efforts have not kept pace with the steady improvement of Soviet capabilities. As noted in the previous section, overall US military expenditures have been relatively limited over the past decade, largely as a result of competing priorities for national resources. Of the US defense funding made available, less than 10 percent was devoted to strategic capabilities. Further, the US has chosen in some instances to delay force modernization in favor of increasing the readiness of existing forces. Modernization and readiness are both essential for a balanced defense program, which must provide an adequate deterrent now and in the future. US strategic force modernization has also been hampered by our tendency to delay or defer the fielding of new systems while pursuing the development of even more advanced capabilities. Waiting for these more advanced capabilities may help to lessen the risk of early obsolescence, but in the interim, deployed US systems tend to fall even farther behind in their ability to meet the existing threat. As a result of these factors, US strategic forces have been supported largely by capital investments made in the 1950s and 1960s. A sustained commitment over several years will be required to rectify this situation and reduce uncertainties in the US deterrent posture.

Crucial Problem Areas

Our primary concerns with the US TRIAD of strategic offensive forces are ICBM vulnerability and declining effectiveness against increasingly hard Soviet targets, SLBM limitations against hard targets, and decreasing ability of US manned bombers to penetrate Soviet defenses. A fourth concern, which affects all elements of the TRIAD, is the problem of assured C³ connectivity between the NCA and the strategic nuclear forces. (C³ connectivity is addressed below after discussion of TRIAD problem areas and modernization efforts.)

Today, ICBM vulnerability is the most serious problem facing any one leg of the US strategic TRIAD. Over the past two decades, the Soviet Union has introduced

four generations of ICBMs as well as multiple independently targetable reentry vehicles (MIRVs) on many of its newer ICBMs. As a result, the Soviet ICBM force has evolved from a few missiles with multi-megaton warheads and limited accuracy to a very large force possessing sufficient accuracy and warhead yield to menace the US ICBM force in an initial attack. Analyses project that a Soviet strike against US missile fields could destroy a major portion of the US ICBM force if the US chooses to ride out the attack before responding. However, the Soviets would still have to contend with the US SLBM force — secure and survivable at sea — and the manned bombers that had been launched for survival at the first confirmed warning of attack.

The SLBM force possesses the highest survivability and best endurance of the US TRIAD, and thus contributes greatly to crisis stability and maintenance of a strategic reserve. Currently deployed SLBMs are effective against economic and soft military targets, but the combination of accuracy and warhead yield is such that the existing SLBM capability against hardened targets is limited. In addition, there is some uncertainty concerning required communications connectivity in a wartime environment between the NCA and ships submerged in distant ocean patrol areas.

Bombers are the most flexible component of the TRIAD. With man continuously in control from takeoff to weapon release, bombers can respond to direction after launch — including recall and target changes — and attack both hard and soft targets with gravity bombs or stand-off air-to-surface missiles. The bomber force, along with other land- and sea-based aircraft, compels the Soviets to spend massively for air defense and thus it diverts funds from other military investments. By the late 1980s, however, increasingly dense and sophisticated Soviet air defenses, if not confronted with modernized US capabilities, will decrease the probability of bomber weapons reaching their targets. Soviet air defense interceptors are projected to be equipped with an improved look-down/shoot-down capability against low altitude penetrators the size of B-52s.

US Strategic Force Modernization

In recognition of deficiencies in US strategic capabilities and of their underlying causes, the US has embarked on a program of strategic force modernization. The program has five segments, three of which directly concern elements of the TRIAD. The remaining segments concern C³ connectivity and strategic defense, which will be addressed in following sections. The limitations of current US strategic forces did not evolve overnight; neither will their solutions.

The deployment of 100 MX missiles — each with at least ten reentry vehicles (RVs) — will address the problem of ICBM vulnerability as well as increase the number and accuracy of ICBM weapons. At least 40 of these missiles will be deployed in MINUTEMAN silos, with initial operational capability scheduled for 1986. In the meantime, an aggressive research and development program is pursuing survivable, long-term basing modes. A decision on one or more permanent, highly survivable basing modes is expected in Fiscal Year (FY) 1983.

Modernization of the sea-based missile force includes the TRIDENT nuclear-powered ballistic missile submarine (SSBN) program and development of an advanced SLBM, the TRIDENT II (D-5). The D-5 missile will equip the 24 launch tubes of each TRIDENT submarine, providing some increase in range and — more importantly — greater payload and accuracy for increased capability against the full spectrum of targets. The TRIDENT D-5 will be available in late 1989. In addition, nuclear-armed sea-launched cruise missiles (SLCMs) will be deployed on attack submarines beginning in FY 1984. Although SLCM-equipped attack submarines will have a primary sea control/antisubmarine mission, they will contribute to the strategic reserve capabilities.

A variant of the B-1 bomber will become operational in 1986, with a force of 100 aircraft scheduled to be in place by the late 1980s. The new B-1B will have a much smaller radar signature than the B-52, thus enhancing bomber penetrability well into the 1990s. In addition, an advanced technology bomber (ATB) is programmed to supplement the B-1B beginning in the early 1990s. If the threat dictates, the ATB could assume the bulk of the penetration role while the B-1, equipped with air-launched cruise missiles (ALCM), performs the stand-off mission.

Some important quantitative effects of US TRIAD modernization are shown in Charts II-8 through II-10. Chart II-8 uses four standard measures of capability to display trends in pre-attack (or static) force potential. Charts II-9 and II-10 use the same four measures to depict the results of dynamic analyses. These dynamic analyses are based on simulated strategic force exchanges that attempt to model real-world operational considerations. US forces used in both the static and dynamic comparisons reflect the current US program of strategic force initiatives. Soviet force data are derived from the latest intelligence projections.

Chart II-8 shows that static force trends favoring the Soviet Union will be arrested or even reversed in the mid-to-late 1980s, assuming the Soviets do not deploy forces in excess of projected levels. The US advantage in total weapons count will continue to decline until

1985, but then stabilize slightly above parity. Estimated growth in Soviet weapons will be offset by deployments of the TRIDENT SSBN, ALCM, MX, and B-1B. The chart also shows that the US will soon lose its slight advantage in hard-target kill potential, a measure of bomber and missile counter-force capabilities, but that the trend will move back toward parity as the US deploys ALCM, MX, and the TRIDENT D-5 SLBM. US deployments will also reverse the trend in equivalent megatonnage, but continuing Soviet emphasis on relatively large warheads will insure a Soviet advantage through the early 1990s. During the same period, the Soviets will continue to enjoy a significant advantage in time-urgent hard-target kill potential, chiefly a result of the increasing accuracy of their modern ICBMs. The trend should reverse sharply by the late 1980s as the US deploys the highly accurate MX and TRIDENT D-5 missiles.

Trends in static or pre-launch force potential, such as shown in Chart II-8, are useful tools for describing the balance of US and Soviet forces. However, only the more sophisticated dynamic methods are capable of introducing into force comparisons such critical real-world considerations as estimated force performance, target systems, and attack strategies. The dynamic simulations, results of which are shown in Charts II-9 and II-10, involved military judgment and thus accommodated many subjective inputs that would pertain to an operational environment. Although such dynamic methods are useful for indicating the degree of uncertainty faced by force planners, they cannot predict the course or outcome of an actual force exchange. Because of the assumptions involved, the results do not indicate absolute capabilities for each side, but rather trends in relative capabilities.

Charts II-9 and II-10 display the computed outcomes of strategic force exchanges in which the Soviets first attack the US target system and the US retaliates in kind. Results are shown for 1987 and 1991, after the US modernization program has begun to have a major effect on the strategic balance. For the analyses depicted in Chart II-9, the forces on each side were assumed to be in a normal, day-to-day alert posture at the start of the Soviet attack. For the analyses of Chart II-10, all forces were assumed to be in a fully generated posture.

In each exchange, targeting approaches for each side were assumed to be the same: attacking all of the opponent's ICBM silos with nuclear weapons and then, using weapons not allocated to that task, inflicting moderate damage on a specified percentage of the remainder of the opponent's target system. The damage goals set in this analysis for US and Soviet targets are different,

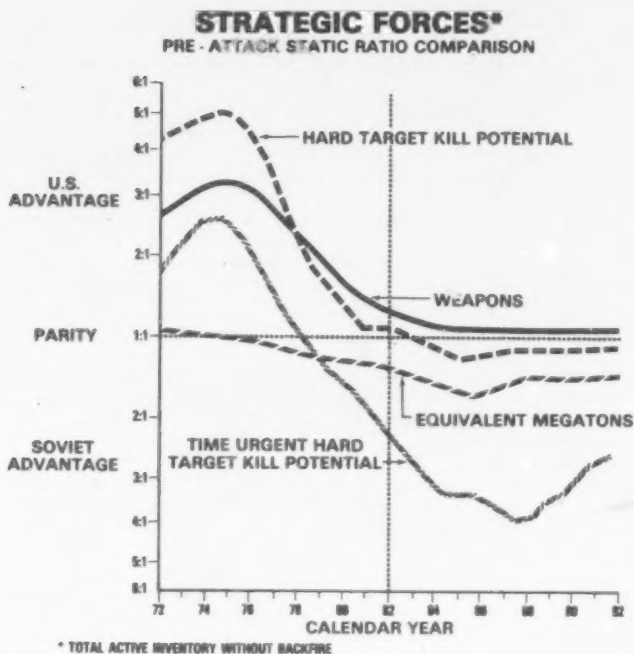


CHART II - 8

but attempt to reflect intended objectives for each side. In addition, the target data bases used in the analysis reflect differences between the US and Soviet target systems in numbers of key targets and vulnerability to nuclear effects.

It was also assumed that the conflict leading to the strategic nuclear exchange did not attrite any strategic delivery systems, the Anti-Ballistic Missile Treaty remained in effect, and the opposing sides employed only nuclear weapons in the homeland-to-homeland exchanges. Additionally, C³ connectivity was assumed for both sides, meaning that all surviving forces received and executed a launch order. This was an important assumption because US strategic C³ systems would probably be degraded in the initial Soviet attack.

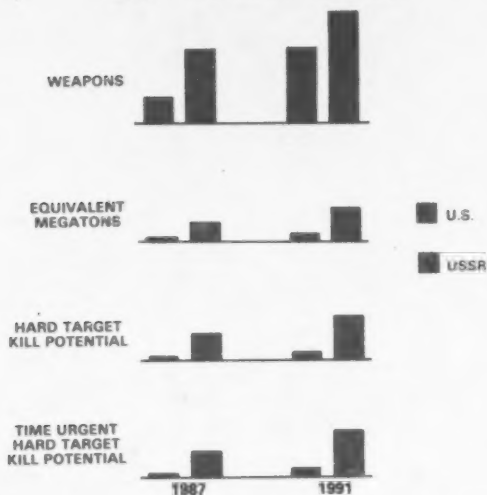
The measurements presented in Charts II-9 and II-10 portray the qualities of the respective remaining forces after the damage has been done to opposing weapons and the required forces have been expended against designated targets. Chart II-9 shows that while both sides would have residual capabilities, the Soviets

would have an advantage in 1987 and 1991, should they initiate an attack with both sides in a day-to-day alert posture and the US choose to ride out the Soviet attack before retaliating. The relative improvement in computed US post-exchange capabilities is a result of the current US strategic force modernization program.

Chart II-10 displays the computed outcomes of exchanges initiated after full generation of US and Soviet forces; again, it is assumed that the Soviets strike first and the US elects to ride out the Soviet attack before retaliating. Unlike the day-to-day alert attack outcomes, which favor the USSR, the generated attack outcomes show much more balanced post-exchange capabilities.

As noted above, Charts II-9 and II-10 both display the results of exchanges in which the US chooses to ride out a Soviet first strike before retaliating. In both cases, the relative US post-exchange posture would be considerably improved if the US were to launch under attack (LUA). Although the US has no policy that assumes or requires launch under attack, the availability of the LUA

STRATEGIC FORCES* POST EXCHANGE RESIDUALS (DAY TO DAY ALERT)



BARS INDICATE RESIDUALS IF U.S. RIDES OUT ATTACK BEFORE RETALIATING
* ON-LINE INVENTORY WITHOUT BACKFIRE

CHART II - 9

option is important because it leaves the Soviets uncertain about how we might respond to an attack.

Finally, it should be noted that the residuals displayed in Charts II-9 and II-10 do not imply an excess capability for either the US or Soviet strategic forces. The actual effectiveness of the post-exchange forces must be considered in view of opposing defenses, responsiveness to targeting requirements, unexpectedly poor system performance, and secure reserve force requirements. Allowance must also be made for possible target base growth and additional hardening (not assumed except for nuclear forces).

The foregoing analyses, although limited in several respects, provide additional evidence that the US must achieve the programmed modernization of TRIAD forces. US strategic force modernization will not have its full impact on the US-Soviet balance until late in this decade, but the adverse trends can be arrested and reversed with the sustained commitment of resources to TRIAD improvement. Sustained US modernization is essential if the US is to respond effectively to a continu-

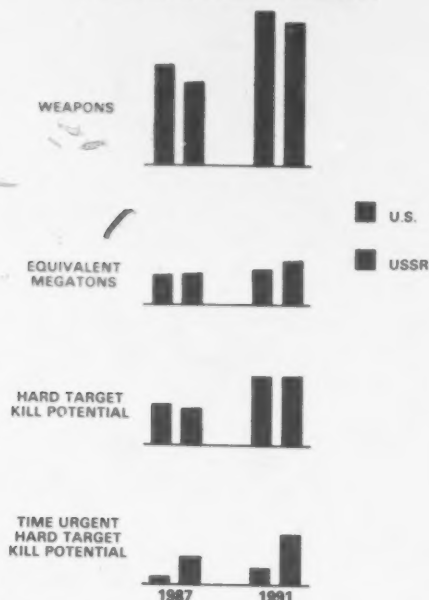
ing Soviet force buildup while at the same time inducing the Soviets to move toward equitable and verifiable strategic arms control agreements. To insure the effectiveness of the US deterrent, it is also essential that the offensive force improvements be accompanied by the programmed modernization of US strategic C³ and strategic defensive capabilities.

Strategic C³ Connectivity

Strategic connectivity encompasses C³ systems that link the NCA and commanders of unified and specified commands to forces in the field. To insure a credible deterrent posture, strategic connectivity must be assured during all phases of a nuclear exchange. In such a conflict, C³ systems will likely be subjected to power outages, jamming, EMP, atmospheric disruption, and physical destruction. Thus force execution, escalation control, and post-strike reconstitution hinge on survivable and enduring C³ capabilities.

C³ improvement has a high priority within the new strategic modernization program. The program includes

STRATEGIC FORCES* POST EXCHANGE RESIDUALS (GENERATED ALERT)



BARS INDICATE RESIDUALS IF U.S. RIDES OUT ATTACK BEFORE RETALIATING
* ON-LINE INVENTORY WITHOUT BACKFIRE

CHART II - 10

numerous measures for improving the timeliness and clarity of assured tactical warning and attack assessment, and for enhancing communications connectivity from the NCA to the strategic forces. C³ improvements include enhanced satellite communications; EMP hardening of bombers, C³ aircraft, and aircraft which relay communications to the SSBNs; and an extremely low frequency system to enable SSBNs to maintain continuous communications while operating submerged at greater depth and speed. To avoid possible confusion and delay, these improvements must be managed as an integrated system rather than on a piecemeal basis.

Strategic Defense

Strategic defensive capabilities contribute to deterrence in ways frequently overlooked. These capabilities include active defenses such as interceptor aircraft, sur-

face-to-air-missiles (SAMs), and ballistic missile defense (BMD) systems; and passive defenses such as surveillance and warning systems, hardening, electronic countermeasures (ECM), and civil defense. All of these capabilities contribute to denying an adversary confidence that he can fully achieve his objectives. This point is not lost on the Soviets, who have deployed more than 7,000 air defense radars, 2,500 interceptors, some 10,000 SAM launchers, and 32 ABM launchers and have devised the most comprehensive civil defense program in the world. By contrast, the US deploys fewer than 120 ground and Airborne Warning and Control System (AWACS) air defense radars, no SAMs for defense of the Continental US (CONUS), and less than 300 interceptors (most of 1950s vintage). Moreover, the US has had no BMD capability since 1976, when the single SAFEGUARD site was phased out, and currently has a very limited civil defense capability.

The fifth aspect of the US strategic modernization program addresses the major deficiencies in strategic defense. One of the most critical of these deficiencies is the lack of adequate air defense. The existing Distant Early Warning (DEW) line and US coastal radars do not provide sufficient all-altitude surveillance coverage for CONUS defense against airbreathing threats. And as noted above, the small US interceptor force is obsolete. Programmed initiatives to improve long-range surveillance for tactical warning of atmospheric attack include modern microwave radars for the DEW line and over-the-horizon-backscatter (OTH-B) radars looking east, west, and south. At least six additional AWACS aircraft will be procured to provide survivable surveillance and command and control for air defense for North America. In addition, five squadrons of F-15 interceptors are programmed to begin replacement of the 1958-vintage F-106.

The strategic modernization program also provides for a US space defense capability as well as the vigorous pursuit of research and development (R&D) on BMD. Currently, the US has no counterpart to the operational Soviet antisatellite (ASAT) interceptor. A US ASAT system would serve to deter Soviet use of ASAT or, if necessary, neutralize satellites that support Soviet wartime objectives. Current R&D programs for BMD are being conducted as a hedge against Soviet treaty abrogation or unconstrained offensive threat growth, and as a potential active defense for US ICBMs. BMD is one of the three major options being considered for long-term enhancement of MX survivability.

The US/Soviet imbalance in passive civil defense is striking. The Soviets are investing more than \$2 billion annually in civil defense and employing about 115,000 personnel to manage and exercise the program. A sheltering program exists for government personnel and 11 percent of the urban population. Almost half of the shelter spaces are for essential workers. The balance of the Soviet population is supported by a program for evacuation. The US currently has no civil defense program comparable in scope, structure, or performance to the existing Soviet effort. The US civil defense program is centered on state and local governments and by statute is a dual-use effort in which the same measures serve natural disaster relief and nuclear attack preparedness. In the past, the US has allocated funding for planning of crisis relocation for selected risk areas, but there are currently no provisions for supporting a dispersed population or protecting war-supporting industry and its labor force.

Conclusion

The steady modernization of Soviet strategic offensive and defensive capabilities has continued for more

than two decades. This trend, coupled with the failure of US modernization efforts to keep pace, has resulted in the loss of US strategic nuclear superiority and increased uncertainty in US capabilities to deter both nuclear and nonnuclear conflict. The relative decline in US strategic and theater nuclear capabilities has reduced the ability of the US to deter or control lower level conflicts by the threat of nuclear escalation. To enhance the deterrence of both nonnuclear and nuclear conflict, the US must modernize the strategic TRIAD and associated C³ systems and upgrade homeland defense capabilities. A sustained commitment is required to correct asymmetries in the strategic balance and create a more stable and secure deterrent.

THEATER NUCLEAR FORCES

The US must possess a broad spectrum of nuclear force options for deterrence of aggression and defense of its interests. Strategic forces provide for many of these options, but other nuclear forces are also required. Theater nuclear forces (TNF) consist of systems for battlefield support; land-based medium and long-range employment; land-based defense; and naval anti-surface ship, anti-air, antisubmarine, and strike warfare.

TNF have recently become the subject of arms control negotiations with the Soviet Union. To support these negotiations and possible Strategic Arms Reduction Talks (START), nuclear forces are now being grouped into the following categories:

- Strategic forces
- Intermediate-range nuclear forces, (INF) which include:
 - Longer-range INF missiles (between 1,800km and 5,500km)
 - Shorter-range INF missiles (1,800km down to short-range nuclear forces)
 - Nuclear capable aircraft (aircraft with less than an intercontinental capability)
- Short-range nuclear forces (SNF), which consist of missiles, rockets, and artillery capable of striking only those targets in the general region of the battlefield

The current US/Soviet arms control negotiations are emphasizing reductions on longer-range INF missiles — the Soviet SS-4, SS-5, and SS-20 ballistic missiles and the US PERSHING II ballistic missile and ground-launched cruise missile (GLCM). As US and Allied positions evolve, the intermediate-range and short-range nuclear forces designations will likely supplant the

theater nuclear forces designations. Because the transition to the new categories is still in progress, the theater nuclear forces designations are used for the most part in this section and elsewhere in the document. The new designations are used in a few selective cases.

Objectives of Theater Nuclear Forces

TNF are designed for use in conjunction with conventional forces to deter conventional, theater nuclear, and chemical attack. Coupling conventional forces to strategic forces, TNF contribute to deterrence by creating uncertainty for the aggressor concerning US and allied responses. TNF also strengthen deterrence by denying the enemy sanctuary behind the immediate battle zone and providing a capability to break up the momentum of a massive offensive. TNF may be used in the event of enemy first use of nuclear weapons or in the event of significant failure of the conventional defense. They also could have utility in retaliation against the enemy's initiation of widespread chemical warfare if US chemical retaliation is ineffective or not available. TNF must be sized and structured to provide a range of responses which will enable the US and its allies to force the aggressor to reassess his objectives in the face of increasing risks of escalation, thereby contributing to the achievement of US and allied objectives.

Theater Nuclear Balance

The US and the USSR, together with their Allies, deploy a variety of land-based theater nuclear systems in Europe. US and Allied TNF contribute to deterrence of Warsaw Pact aggression by providing the capability to support NATO's strategy of flexible response, which is based on a triad of conventional, theater nuclear, and strategic nuclear forces. The TNF balance in Europe, however, has shifted away from NATO. The Soviet Union continues to expand and modernize its TNF in Europe, while US and Allied deployments have decreased from more than 7,000 warheads in FY 1981 to less than 6,000 today.

Soviet TNF modernization has continued during the past year with deployment of long-range SS-20 missiles and new short- and medium-range systems. The SS-20, with three MIRVs per missile and significant improvements in survivability, mobility, responsiveness, and accuracy, is a far more capable weapon than the older SS-4 and SS-5 missiles. As shown in Map II-1, the SS-20 can cover the entire European theater and provide significant coverage of other areas. The worldwide balance in long-range TNF (longer-range INF) missiles is shown in Chart II-11.

NATO nuclear initiatives have not kept pace with Soviet modernization efforts. NATO currently has no land-

based, long-range missiles comparable to SS-4, SS-5, and SS-20 systems. Since the long-range TNF (LRTNF) modernization decision of December 1979, NATO has been planning the deployment of a mix of GLCMs and PERSHING II ballistic missiles; these systems are compared to Soviet missiles in Chart II-12. With increased capabilities and better survivability, the new NATO systems will begin to redress the imbalance in Europe and help deter the use of Soviet long-range systems and other capabilities. These systems, however, will not enter service until late 1983 and will not be fully operational until after the middle of the decade.

The Warsaw Pact also has a growing capability in medium-range TNF (shorter-range INF) missiles based in Europe (Chart II-13). Continuing Soviet deployment of the modern SS-22 missile and development of the SS-X-23 provide the Warsaw Pact with increased firepower and a greater range of options for theater nuclear conflict. The Pershing IA missile provides NATO with its only medium-range missile capability.

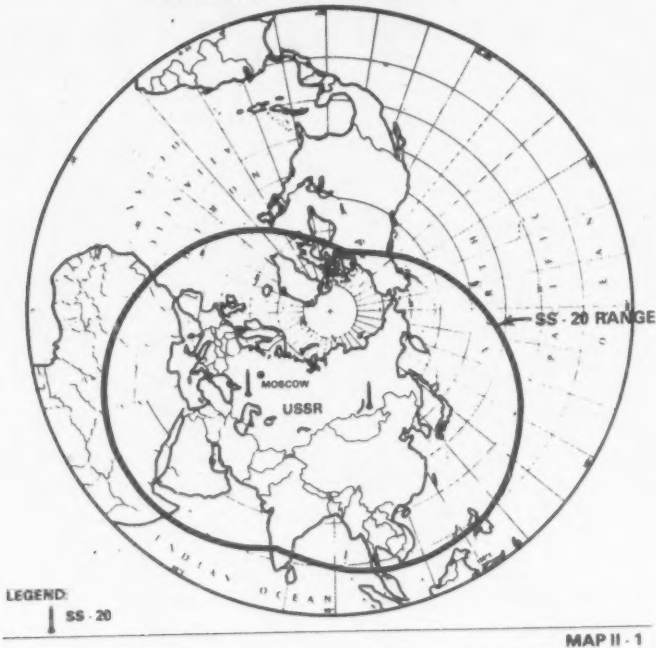
The European balance in land-based nuclear capable aircraft continues to favor the Warsaw Pact. NATO capabilities, however, are gradually being enhanced by deployment of the US F-16 fighter and the British/German/Italian TORNADO fighter-bomber.

NATO continues to hold an advantage in numbers of short-range TNF systems deployed in Europe. The Soviets, however, are introducing nuclear artillery and have essentially doubled the Warsaw Pact's short-range TNF capability since 1970. The US short-range TNF capability against massed armor will be increased substantially with the introduction of enhanced radiation (ER) warheads for LANCE missiles and nuclear-capable artillery. There are no plans at this time to deploy these weapons outside US territory. The United States will consult with its Allies in advance of any decision to deploy ER warheads to Western Europe.

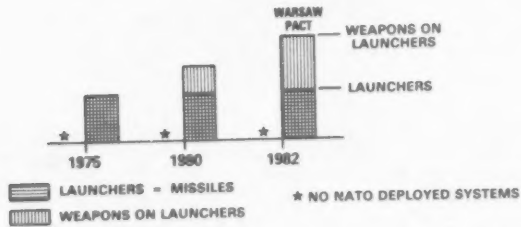
As the foregoing comparisons have shown, the Warsaw Pact holds an overall advantage in TNF deployed in Europe. To meet the challenge posed by the modernization of Warsaw Pact TNF, NATO must maintain the momentum of current plans and programs to modernize its TNF, especially the longer-range missile systems, as the US pursues arms control negotiations with the Soviet Union.

The TNF balance outside of Europe is also adverse. The US deploys theater nuclear weapons with land-based forces at forward locations and with naval forces afloat, but faces a growing threat from SS-20 missiles based in the USSR and from increasingly capable Soviet naval TNF. The Soviet Navy is equipped with a full spectrum of modern air, surface, and subsurface nu-

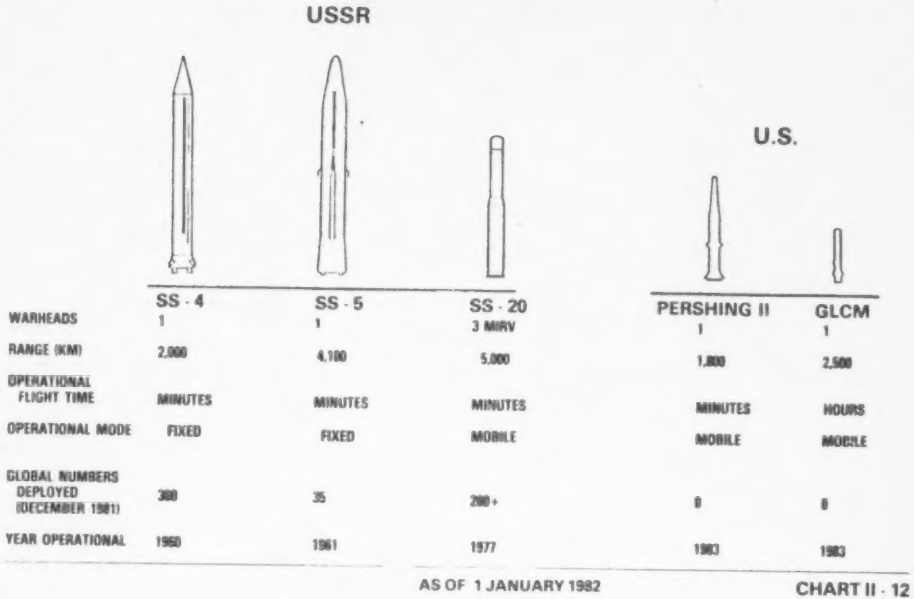
SS - 20 COVERAGE FROM SOVIET BASES



NATO - WARSAW PACT LONG - RANGE TWF (LONGER - RANGE INF) MISSILES LAND - BASED SYSTEMS - WORLDWIDE



LONG RANGE TNF (LONGER-RANGE INF) MISSILES



NATO - WARSAW PACT MEDIUM - RANGE TNF (SHORTER - RANGE INF) MISSILES LAND - BASED SYSTEMS - EUROPE

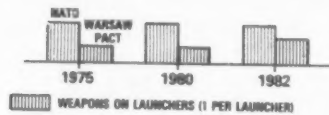


CHART II - 13

clear weapons. In contrast, US maritime TNF are fewer and aging rapidly. US initiatives in maritime nuclear forces include the deployment of TOMAHAWK Land-Attack Missile-Nuclear (TLAM-N), beginning in FY 1984; development of a new surface-to-air missile for fleet air defense; and research and development for a new nuclear antisubmarine warfare weapon.

The Soviet TNF threat in non-NATO areas requires an adequate US capability for deterrence or, if necessary, a military response to Soviet aggression. The US has reviewed force levels and system requirements in an effort to achieve a TNF posture that will correct existing imbalances and provide credible, flexible responses, particularly at the lower levels of nuclear warfare. Such a

posture will provide timely and accurate nuclear options for reinforcing deterrence outside the NATO area.

CONVENTIONAL FORCES

US and allied conventional forces are maintained to defend vital interests, deter aggression, and promote stability. These are the most likely forces to be employed in actual conflict and thus bear much of the responsibility for deterring aggression. Loss of US strategic nuclear superiority and the growing Soviet advantage in theater nuclear forces have further increased the deterrent responsibilities of US and allied conventional forces.

Conventional warfighting capabilities of the Soviet Union and its supporting coalitions have been increasing quantitatively and improving qualitatively much faster than those of US and allied forces. The Soviets are now fielding weapon systems as capable as, or in several categories superior to, US systems. The Soviet Union and its allies are increasing their long-standing advantages in Europe and Southwest Asia, and are shifting the balance against the US and its allies in East Asia and the Pacific. These adverse trends impair the US and allied ability to maintain a credible deterrent and, consequently, threaten stability worldwide.

Balance In Europe

The conventional force balance in Europe continues to shift toward the Soviet Union and its Warsaw Pact allies. Although the US and other NATO countries have improved their capabilities, the ability of the Alliance to field defensive systems has not kept pace with the growth of Warsaw Pact offensive capabilities. The most important factor in the Pact's progress has been the improved quality of combat equipment, supplied primarily by the Soviet Union. The enhanced ability of Pact personnel to employ their equipment, made possible by improvements in leadership, organization, and training, has also been important. The Warsaw Pact has long held a numerical advantage over the Alliance and is now intent on removing NATO's long-standing qualitative advantages.

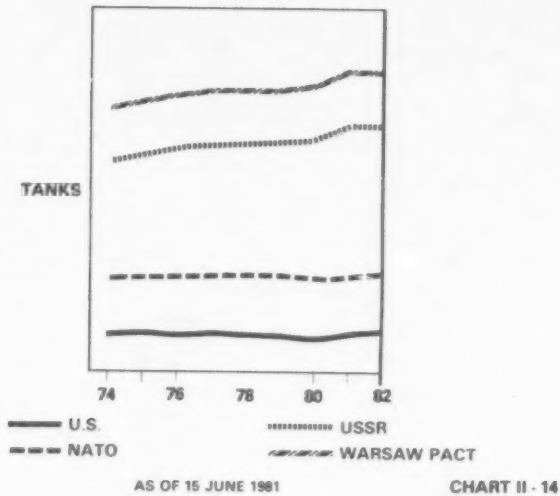
The static force comparisons discussed below clearly indicate that the Warsaw Pact will maintain a numerical advantage over NATO in many categories. This advantage alone, however, does not imply that the Pact could confidently expect to succeed in a conventional attack on Western Europe. NATO's strategy of flexible response does not require that NATO forces match Warsaw Pact forces in all respects. Advantages that accrue to NATO as the defender would help offset the superiority of attacking forces. Although relative force levels are important, a full assessment of the balance must ad-

dress differences in strategy, doctrine, tactics, readiness, and other factors not accounted for in static analyses.

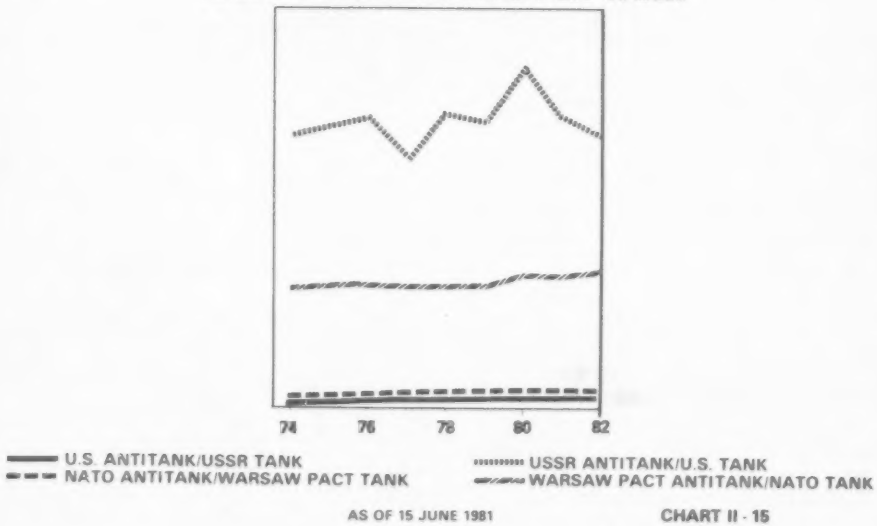
Static comparisons are displayed in Charts II-14 to II-27. Except where noted, these charts cover worldwide inventories and thus include equipment located out-of-theater as well as in Europe. Since these are worldwide charts, they must be interpreted with certain qualifications. NATO trends, for example, include data on French forces, which although not integrated into NATO's military structure, form a significant part of Western Europe's defenses. The trends also reflect US and USSR forces that could be employed in a simultaneous conflict in Southwest Asia and forces that would remain deployed in the Pacific and elsewhere. Warsaw Pact totals include Soviet forces deployed opposite China (approximately 25 percent of Soviet ground and tactical air forces); significant drawdown of these out-of-area Soviet forces to reinforce the Warsaw Pact in Europe is considered unlikely as long as China remains hostile to the Soviet Union. Although the worldwide charts include assets that might not be committed to a war in Europe, they serve to indicate the forces that both sides could draw upon for reinforcement of forces deployed in Europe.

As Charts II-14 through II-21 show, trends in ground forces equipment are highly adverse for NATO. Warsaw Pact advantages continue to grow with the introduction of new tanks, self-propelled artillery, amphibious armored infantry combat vehicles, and modern air defense missile systems. For example, the Warsaw Pact currently has a 3 to 1 advantage in tanks and is expected to widen the margin despite deployment of several new NATO tanks, including the advanced M60A3 and the newer M1, now being received by the US Army (USA). The Pact has exceeded NATO's modernization program by wider deployment of T-64 and T-72 tanks within their forces, introducing a small number of T-72s in armies of their allies, and continuing development of a new tank, designated the T-80. The Pact's advantages in tank battles could be even greater than this quantitative margin implies since the Soviets have incorporated increasingly effective fire control and armor into their tanks. The imbalance in antiarmor weapons also continues to widen. This disparity is exacerbated by a new generation of more accurate tube-launched antitank guided missiles with greater range and penetrativity. Since NATO will not field as many antitank weapons as the Pact has tanks, it must rely heavily on the contribution of close air support (CAS) aircraft and helicopters to defeat the enemy's armor. Significantly, a rapid increase in the Pact's assault helicopters will overturn one of NATO's few numerical advantages by the mid-1980s. Weapon

MEDIUM AND HEAVY TANKS



ANTITANK WEAPONS PER TANK



systems such as the Mi-8/HIP E and Mi-24/HIND helicopters have considerably increased the Pact's ground assault capability, providing a source of responsive CAS unavailable in the past.

The disparity in artillery and multiple rocket launchers (MRL), antiaircraft artillery (AAA), and surface-to-air missile launchers also weighs heavily in the Warsaw Pact's favor. The Pact's artillery/MRL advantage will likely increase through the end of the decade. To some degree, Pact numerical advantages in artillery are offset by US technological superiority. However, until NATO forces are equipped and trained to employ such technically superior weapons as rocket-assisted projectiles, independent submunitions (to include scatterable mines), and laser designation and automated fire control systems, this potential advantage cannot be realized.

The growth in Warsaw Pact SAM systems has provided the Warsaw Pact a significant advantage in air defense capabilities. The SA-4 medium-to-high-altitude system (employed at both Front and Army levels); the SA-6, SA-8, and SA-11 low-to-medium-altitude systems (employed at division level); and the SA-9 and SA-13 low-altitude systems (fielded in conjunction with the ZSU-23-4 AAA system at regiment level) provide the Pact an impressive mobile, all-weather air defense capability. Warsaw Pact advantages in anti-air capabilities are shown in Charts II-18 through II-21, which com-

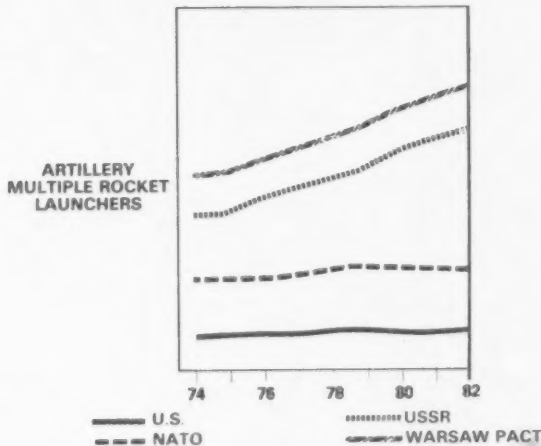
pare one side's aircraft to the other's air defense capabilities. The extensive air defense network of the Warsaw Pact has allowed the Soviets to divert some frontal aviation aircraft from air defense to ground attack roles.

The air balance between NATO and the Warsaw Pact must be viewed in the context of the alliances' differing requirements for tactical air. NATO places heavy reliance on CAS to partially offset the large ground force firepower imbalance. In contrast, the Warsaw Pact, with its heavy emphasis on armor and artillery in a combined arms offensive, has relied less on CAS for success, although its CAS capabilities are increasing.

Charts II-22 and II-23 provide two perspectives on the air balance worldwide. Read horizontally, the charts display the relative strength of interceptor and offensive aircraft; read vertically, they provide head-to-head comparisons of offensive strength and opposing interceptors. Offensive forces include interdiction, CAS, and long-range bomber aircraft. The charts also reflect the Soviet penchant for defensive air power. More than 60 percent of the Warsaw Pact fighter force is currently allocated to defensive counterair missions.

In addition to its numerical advantages, the Warsaw Pact has made significant qualitative improvements in conventional airpower capabilities. Extensive modern-

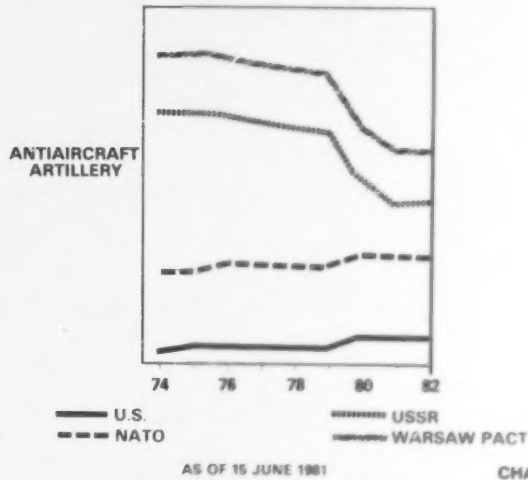
ARTILLERY AND MULTIPLE ROCKET LAUNCHERS



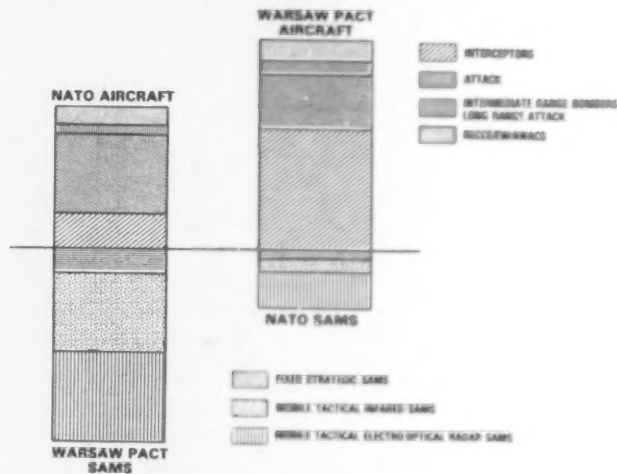
AS OF 15 JUNE 1981

CHART II - 16

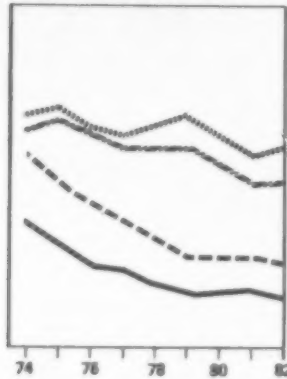
ANTI-AIRCRAFT ARTILLERY



COMBAT AIRCRAFT VERSUS SAM INVENTORIES EUROPE - UNREINFORCED - 1982



OFFENSIVE AIRCRAFT VS TACTICAL SAM TEL

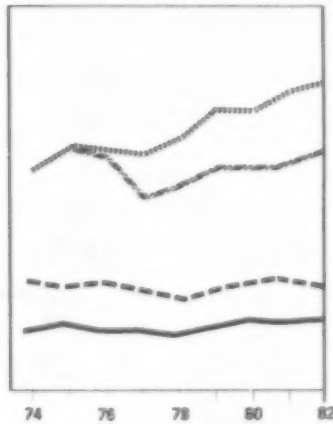


— U.S. AIRCRAFT/USSR SAM USSR AIRCRAFT/U.S. SAM
 - - - NATO AIRCRAFT/WARSAW PACT SAM - . - - - WARSAW PACT/NATO SAM

AS OF 15 JUNE 1981

CHART II - 19

ATTACK AIRCRAFT AND HELICOPTERS VS MANPACKED SAM

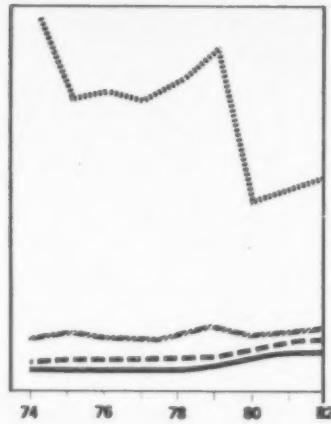


— U.S. AIRCRAFT / USSR MANPACKED SAM
 - - - NATO AIRCRAFT / WARSAW PACT MANPACKED SAM
 USSR AIRCRAFT / U.S. MANPACKED SAM
 - . - - - WARSAW PACT AIRCRAFT / NATO MANPACKED SAM

AS OF 15 JUNE 1981

CHART II - 20

ATTACK AIRCRAFT AND HELICOPTERS VS ANTIAIRCRAFT ARTILLERY

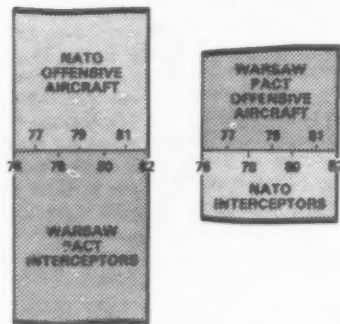


— U.S. AIRCRAFT / USSR ANTI-AIRCRAFT ARTILLERY
 - - - NATO AIRCRAFT / WARSAW PACT ANTI-AIRCRAFT ARTILLERY
 USSR AIRCRAFT / U.S. ANTI-AIRCRAFT ARTILLERY
 — WARSAW PACT AIRCRAFT / NATO ANTI-AIRCRAFT ARTILLERY

AS OF 15 JUNE 1981

CHART II - 21

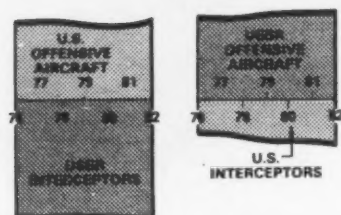
NATO vs WARSAW PACT (AIRCRAFT)



AS OF 15 JUNE 1981

CHART II - 22

U.S. vs USSR (AIRCRAFT)



AS OF 15 JUNE 1981

CHART II-23

ization during the 1970s greatly enhanced Soviet air defense and air-to-ground capabilities. First-line Soviet aircraft, with increasingly sophisticated avionics and weaponry, are now demonstrating advanced tactics. Significant improvements have been made in aircraft speed, range, and munitions. Soviet air forces deployed to forward areas are becoming a modern attack force capable of providing responsive CAS to Warsaw Pact ground forces. Through the mid-1980s, however, the current generation of US/NATO tactical aircraft will retain qualitative superiority in both air-to-air and air-to-ground capabilities.

The Warsaw Pact also holds advantages over NATO in other areas such as chemical warfare, electronic warfare, and C³. In the CW area, the Warsaw Pact is continuing to upgrade its capabilities to conduct offensive CW operations. Coordinated training by Pact countries has emphasized operations and force survival on contaminated battlefields. Occasional use of lethal chemicals during large-scale exercises has added realism and confirms a high state of readiness. Although non-Soviet Warsaw Pact forces are not as proficient as Soviet forces in CW operations, their proficiency is improving rapidly. NATO capabilities, in comparison, may be insufficient for deterring Pact first use of chemical weapons or for terminating CW at the lowest level of use.

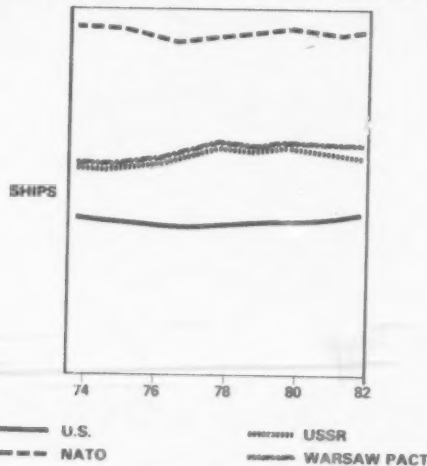
In the EW area, Soviet emphasis on radio electronic combat (REC) gives the Warsaw Pact an increasingly integrated capability to disrupt NATO's C³ nets, degrade air defenses, and use radar-directed air defense to counter NATO air forces. The Soviets have made a strong commitment to REC by massive hardware de-

ployment; the Warsaw Pact has modern equipment jamming battalions and many REC-dedicated jamming aircraft opposing NATO. US and NATO EW capabilities have not kept pace with the threat. It is essential that NATO equip its forces with EW systems to counter Soviet REC capabilities.

While a direct comparison of US/NATO and Soviet/Warsaw Pact C³ systems would be difficult, there is one aspect which should not be overlooked in force comparisons — the basic differences in the member relationships within the two alliances. The Soviets dictate C³ system standards for the Warsaw Pact while NATO C³ system standards are developed through compromise between competing systems. Currently, NATO C³ systems are far from standard, giving the Warsaw Pact clear advantages in command and control of operational forces. To combat this problem, NATO has undertaken a number of initiatives, designed to provide interoperable, jam-resistant, and survivable C³ capabilities. The Airborne Warning and Control System represents a significant improvement for air battle management in the 1980s. The AWACS' long-range/low-altitude coverage provides a force multiplier for countering numerically superior Warsaw Pact aircraft in the coming decade. However, until the AWACS' capability is fully integrated into a standardized NATO C³ system, its full potential will not be realized.

As in the case of land and air forces, trends in the balance at sea have increased the risk to NATO (Charts II-24 through II-27). Critical sea LOCs must remain open for the US to reinforce Europe and sustain its forces.

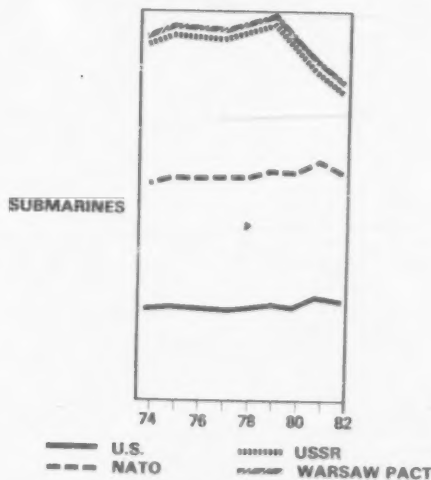
PRINCIPAL SURFACE COMBATANTS



AS OF 15 JUNE 1981

CHART II - 24

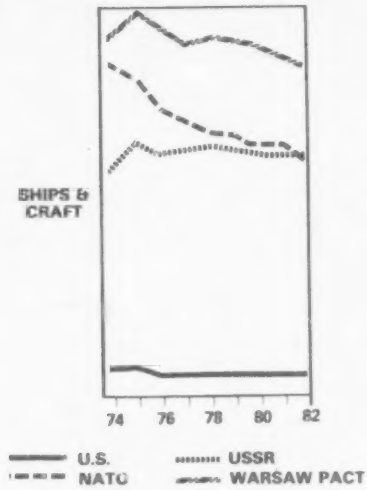
GENERAL PURPOSE SUBMARINES



AS OF 15 JUNE 1981

CHART II - 25

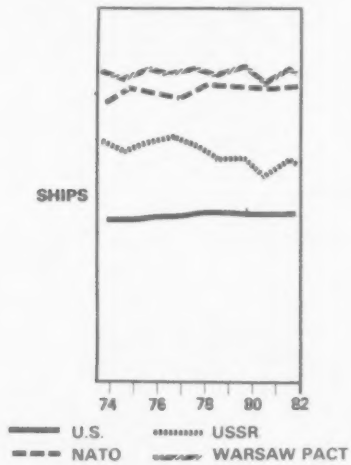
MINE WARFARE SHIPS AND CRAFT



AS OF 15 JUNE 1981

CHART II - 26

AMPHIBIOUS SHIPS



AS OF 15 JUNE 1981

CHART II - 27

Yet the Warsaw Pact's ability to interdict NATO's SLOCs is increasing. Pact naval forces (predominantly Soviet), are equipped with a large number of general purpose submarines, land-based strike and anti-submarine warfare (ASW) aircraft, and sophisticated modern surface units carrying fixed or rotary wing aircraft. NATO's naval forces are improving through modernization, but are not assured of gaining and maintaining sea control. To insure the integrity of the Atlantic SLOCs, the Soviet surface and submarine fleets must be bottled up north of the Greenland-Iceland-United Kingdom (GIUK) gap. However, the US carrier battle groups necessary for this task are not available without a draw-down elsewhere. In the area of mine warfare, NATO must have the capability to sweep deep-laid Soviet mines to preserve its SLOCs and reinforcement ports. Overall, significant shortages in assets and the inability to conduct sustained combat operations degrades the capability of NATO's naval forces to support the land battle and concurrently maintain continuous SLOC protection. US naval forces, together with those of the Allies, must be capable of performing the operations necessary to protect NATO's SLOCs and carry the battle to the enemy.

The foregoing static comparisons offer some insight into respective capabilities of NATO and the Warsaw Pact forces if engaged in a European war. Dynamic wargaming analyses add another dimension for evaluating NATO's capability to defend against a Warsaw Pact invasion. These analyses introduce an active opponent and the element of time, and thereby permit consideration of variables such as mobility, command and control, terrain, and tactics. Even dynamic analysis has limitations, however; it cannot incorporate such imponderables as leadership or morale and it is particularly dependent upon the choice of scenarios, assumptions, and judgment.

The results of recent dynamic assessments support the unfavorable trends depicted in the foregoing static comparisons of NATO and Warsaw Pact military capabilities. In addition, the dynamic assessments show that the success of the Alliance in a conventional conflict in Europe will be affected by the time available for mobilization, the survivability of external reinforcements, and the availability of sufficient munitions and other consumables. Static and dynamic analyses both underscore the need for NATO to improve its capability to deter conventional attack.

Conclusion

The conventional military balance in Europe has shifted in favor of the Warsaw Pact over the last decade. A growing accumulation of deficiencies is degrading the Alliance's ability to maintain a credible deterrent. Under-

funding has delayed NATO's modernization efforts and severely limited resources required to support readiness and sustainability. The current disparity in military power in Europe can only be reduced by strong US leadership, coupled with increased US and Allied defense investment to obtain the military capabilities required to execute NATO's strategy successfully.

US and Soviet Capabilities in Southwest Asia

Free world access to Arabian Gulf oil is vulnerable to internal upheavals, regional conflict, and external threats. The US is vitally concerned with maintaining this access, and is continuing efforts to increase its influence with friendly regional states and improve capabilities for projecting military power to the area.

US diplomatic and military activities in the region support a strategy of deterrence against a full range of threats. Numerous actions are underway to bolster regional states and encourage their cooperation with the US to improve the military balance in the area. The presence of US Navy forces in the Indian Ocean; Army, Marine, and Air Force deployments; deployments of E-3A AWACS aircraft to Egypt and Saudi Arabia; and combined exercises in Southwest Asia are examples of such efforts. The growing capability of the Rapid Deployment Joint Task Force is also an essential element of the overall US deterrent strategy.

Soviet Capabilities

Although the least likely threat to US interests in Southwest Asia, a full-scale Soviet invasion of Iran would be the most demanding threat and potentially the most damaging to US interests. Continued internal instability or disintegration of governmental control in Iran, or a serious local conflict between Iran and one of its neighbors, might provide a pretext for Soviet military intervention.

While Soviet forces available for military actions in Southwest Asia are considerable, the threat must be considered in perspective. A Soviet invasion force would enjoy a numerical advantage in personnel and equipment; however, Soviet commanders would find it difficult to mass their forces. Iran is a big country with formidable terrain. Ground units and resupply would be moved predominantly by road over routes vulnerable to military action and natural impediments such as snow and floods. With limited frontages, long axes of attack, and the need to maintain security of the LOCs, Soviet forces could become strung out and separated. A large portion of the force would be absorbed in rear-area security, and mutual support between axes would be difficult; air defense would be scattered and spread thin. So-

viet aircraft would be operating without low-level ground-controlled intercept radar or fast-reaction interceptor aircraft coverage and, in later stages of the conflict, would operate from minimum-capability airfields in Iran. The appearance of overwhelming numbers of Soviet forces could be dissipated in the long defiles of the Zagros Mountains.

US Capabilities

US ability to project military power to the Southwest Asia region and sustain the forces there is hampered by extremely long sea and air routes which place a high demand on US airlift and sealift capabilities; harsh environmental conditions; lack of a long haul communications site; lack of an established supporting infrastructure; and limited US basing, staging, and transit rights. Current elements of US strategy call not only for improved US military capabilities, but also increased allied support in Europe and Southwest Asia. Much progress has been made, and more is anticipated over the next three to five years based on current initiatives. Regional naval support facilities and access to facilities ashore for prepositioning equipment and supplies have been increased. Initiatives afloat include the 13-ship Near-Term Prepositioning Force (NTPF). By FY 1987, maritime prepositioning ships containing equipment and supplies for three Marine Amphibious Brigades (MAB) will replace part of the NTPF, providing US forces with a dramatic increase in both sustainability and deployability. Prepositioning initiatives ashore include plans for obtaining POL support from our allies and regional friends. Agreements are being sought with numerous countries for additional facilities that could increase enroute, overflight, and recovery access. Recent US airlift and sealift initiatives include plans to procure long-range, outsized cargo-capable aircraft, and purchase of eight SL-7 container ships. Each of these programs will significantly enhance US lift capabilities.

It must be made clear to the Soviets and US friends and allies that the US has the will and the capability to deploy a credible combat force rapidly and is fully committed to the defense of free world interests in Southwest Asia. This commitment requires combat forces capable of deterring regional threats. The RDJTF is a combat force designed to meet this requirement.

The RDJTF became a separate joint task force (an interim status pending its designation as a unified command) reporting to the NCA through the Joint Chiefs of Staff (JCS) in October 1981. The decision to establish a joint headquarters to plan, train, exercise, deploy, and employ forces signals US resolve to protect vital interests in Southwest Asia. Component headquarters and selected forces have been placed under the operational

control (or in support) of the Commander, RDJTF. Major forces currently available to the RDJTF for planning are shown in Chart II-28, but additional forces could be employed in Southwest Asia. Forces assigned to other commands, including some held in CONUS reserve, also may be made available for contingencies in the Southwest Asia theater.

The Army has made extraordinary efforts to train units allocated to the RDJTF and has undertaken actions to enhance combat service support capabilities to support the RDJTF in the austere environment of Southwest Asia. The Air Force has filled all key billets in RDJTF wings and reallocated war reserve spares kits to these units, insuring that they are prepared to deploy and fight promptly. Marine Corps units are in a high state of readiness, and the 7th MAB's equipment (aboard NTPF) is ready for immediate use. A significant portion of the naval forces that would support the RDJTF are already deployed in the Indian Ocean.

Although serious shortfalls remain in capabilities for deployment (mobility assets) and employment (sustainability) of forces, significant progress is being made in these areas. Recent budgetary decisions will improve vitally needed sealift and airlift capabilities. RDJTF C³ capabilities will be improved in order to preclude diversion or drawdown of critical C³ resources allocated for NATO forces. Operation plans for various contingencies are being prepared and will be complete by the time the RDJTF is designated a unified command.

Balance in East Asia and the Pacific

The growing likelihood that a US/Soviet conflict would expand to global war causes increasing concern over the military balance in East Asia and the Pacific. One of the most demanding challenges facing the US in the 1980s will be to develop and demonstrate the capability to deter or defeat Soviet and other aggression against US vital interests in the region.

The US/Soviet military balance in East Asia and the Pacific is unfavorable and continues to deteriorate (Map II-2). US and allied forces have not kept pace in capability. While US ground and air forces in the Pacific have remained fairly constant, naval forces have suffered a decline over the past decade.

A number of other countries contribute, in varying degrees, to the regional military balance. Vietnam provides air and naval basing facilities to the Soviet Union and generally can be expected to support Soviet objectives. North Korea, while perhaps less closely tied to the Soviet Union, continues to pose a military threat to the Republic of Korea. China maintains a hostile stance to-

FORCES ALLOCATED FOR PLANNING RAPID DEPLOYMENT JOINT TASK FORCE

SERVICE	UNIT
ARMY	HQ XVIII AIRBORNE CORPS 182d AIRBORNE DIVISION 101st AIRBORNE DIVISION (AIR ASSAULT) 24th INFANTRY DIVISION (MECH) 8th CAVALRY BRIGADE (AIR COMBAT) RANGER AND SPECIAL FORCES UNITS
AIR FORCE	7 BOMBER SQUADRONS 12 TACTICAL FIGHTER SQUADRONS 2 TACTICAL RECONNAISSANCE SQUADRONS 9 TACTICAL AIRLIFT SQUADRONS
NAVY	3 CARRIER BATTLE GROUPS 1 SURFACE ACTION GROUP 5 MARITIME PATROL SQUADRONS
MARINES	1 MARINE AMPHIBIOUS FORCE (MARINE AIR GROUND TASK FORCE) 7th MARINE AMPHIBIOUS BRIGADE (MAGTF/INTPF)

AS OF 1 JANUARY 1982

CHART II - 28

ward the Soviet Union and seeks closer ties with the US. The US has mutual defense arrangements with several nations in the region. While Asian allies generally support US objectives in Asia, diverse views of threats and different preferred solutions limit the military contributions by US allies to the overall regional balance.

US interests in the area are threatened by potential aggression from regional states. The principal area of concern remains the Korean Peninsula, where the forces of North and South Korea have faced each other over a four-kilometer-wide demilitarized zone for 28 years. To the south, Vietnam's occupation of Kampuchea threatens Thailand's security and is a potential cause for intervention by China.

US-Soviet Military Balance

The Soviets have clearly recognized the importance of East Asia and the Pacific and have taken impressive steps to increase their presence and influence. Through an increase in naval capabilities over the past decade, the Soviet Pacific Fleet has become the largest of the four Soviet fleets, with more than 80 major surface combatants, over 70 submarines, and approximately 400 aircraft. With an increased naval presence in the Western Pacific and the Indian Ocean, the Soviets are well posi-

tioned to counter US naval forces or use these forces to support other political objectives. Soviet air forces in the Pacific now include the BACKFIRE bomber and latest fighters. With these forces, the Soviets are increasingly capable of interdicting air and sea lines of communication. Additionally, the Soviets have over 45 divisions deployed in the Far East against China and Japan. These forces have been modernized with new tanks, self-propelled artillery, helicopters, missiles, armored vehicles, and small arms.

Although the Soviets have large and powerful forces in the region, they also face significant limitations. In the event of war with the US, significant portions of these Soviet air and ground forces could be tied down by Chinese forces. Soviet forces deployed outside the Soviet Union would require long air and sea LOCs, which would be subject to interdiction. Additionally, Soviet distant power projection efforts would be complicated by limited overseas bases and support structure, coupled with a marginal long distance airlift capability.

US forces under the Commander in Chief, Pacific (CINCPAC), consist of approximately 315,000 personnel, the lowest force level in over 20 years. US Army

MAJOR POWER BALANCE IN EAST ASIA AND THE PACIFIC



AS OF 1 JANUARY 1982

MAP II - 2

forces consist of a corps headquarters in Japan and two infantry divisions located in Hawaii and Korea. The infantry division in Korea serves as a visible example of the US commitment to the defense of the ROK.

US naval forces in the Pacific are composed of two fleets consisting of 6 aircraft carriers, 14 cruisers, 72 destroyers/frigates, 39 submarines, and 31 amphibious ships. Naval aviation forces consist of 6 carrier air wings and 12 maritime patrol squadrons. Two Marine Amphibious Forces located in Okinawa/Japan and California are also under the operational command of CINCPAC. The requirement to maintain a continuous and increased presence in the Indian Ocean has resulted in a draw-down of Pacific naval forces.

US Air Force units located in the Pacific consist of two numbered air forces comprising 9 tactical fighter squadrons (F-4/F-15/F-16), two tactical airlift squadrons (C-130), one bomber squadron (B-52D), one special operations squadron (MC-130E), and one AWACS squad-

ron (E-3A). Air Force units support forward deployed ground forces and conduct counterair operations in support of regional operation plans.

The general reduction of US Pacific force levels in conjunction with a significant increase in Soviet military capabilities may well encourage bolder Soviet moves. US forces in the Pacific no longer possess a margin of superiority and, in a worldwide conflict, may have to fight numerically superior Soviet forces. While recent budgetary initiatives have resulted in many new programs, current favorable funding trends must be continued and improvements made in the areas of sustainability, mobility, assets, and C³ systems.

Regional Power Contributions

China. For the next decade, the People's Republic of China's (PRC) main adversary, the Soviet Union, will hold a commanding position over China in all aspects of ground, air, and naval power. However, improvements

to Chinese forces forecast for the 1980s will enhance Beijing's ability to deter a Soviet invasion, project forces into Southeast Asia border regions, and raise foreign perceptions of Chinese military capabilities.

Japan. Japan continues to be a vital partner in US strategy for Asia and the Pacific. Although linked to the US by the Mutual Defense Treaty, the Japanese government is constitutionally restricted from deploying Japanese Self Defense Force units (See Appendix A) outside of Japan and nearby waters in any capacity other than defense.

ANZUS. The ANZUS Treaty provides the basis for defense against external threats in the Southwest Pacific. While both Australia and New Zealand possess small armed forces (See Appendix A), these countries have historically taken active roles in maintaining free world security. The US should continue to center its security relationships in the Southwestern Pacific on ANZUS and work within the ANZUS agreement to support US objectives in Southeast Asia, Southwest Asia, Indian Ocean, and Arabian Gulf.

The Balance in Korea

For more than a decade, North Korea has modernized and expanded its armed forces. Although a large share

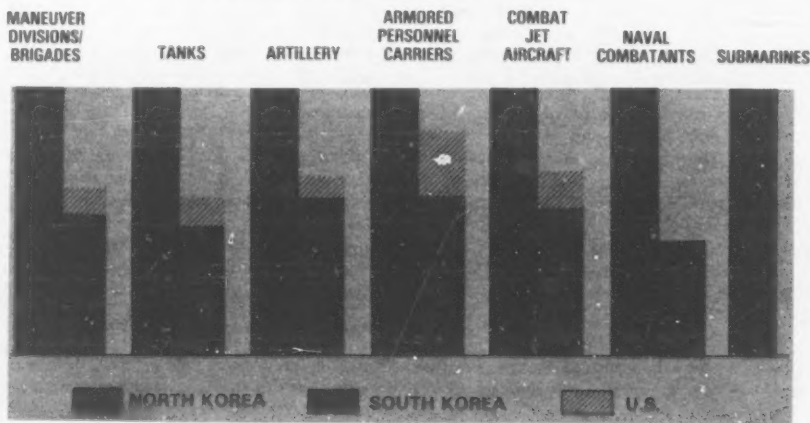
of the North Korean military investment has gone into defensive improvements, its capability for conducting large-scale conventional offensive operations has grown considerably. Thus, the ROK will face a formidable threat at least until the late 1980s.

As shown in Chart II-29, North Korean ground forces exceed those of the ROK in almost every significant aspect. The North Korean Army (NKA) has been increasing the mobility and mechanization of its infantry forces through the acquisition of trucks and armored vehicles, and upgrading its armored forces by adding medium, light, and amphibious tanks to its inventory. In addition, the North has improved the combat support for armor and infantry forces by producing increasing numbers of self-propelled artillery.

The North Korean Navy (NKN) has increased its overall competence while dramatically improving its offensive capabilities. Since 1971, the number of missile attack boats has increased by one-third, coastal patrol craft doubled, submarines more than tripled, and amphibious warfare craft more than quadrupled.

During the same time period, the North Korean Air Force (NKAF) has improved its effectiveness, increased its aircraft inventory, and continued to expand and

COMPARISON OF U.S. / SOUTH KOREAN FORCES AND NORTH KOREAN FORCES



AS OF 1 JANUARY 1982

CHART II - 29

harden its airfields. The number of fighters and bombers has increased by about 20 percent, while transports and helicopters have almost tripled.

In addition to being larger than ROK forces, North Korean forces are continuously postured for attack. This posture is a primary cause of tension on the Korean Peninsula. Nearly half of North Korea's forces are positioned near the demilitarized zone (DMZ). With the remaining rear forces capable of moving forward rapidly, the North has the capability to strike into the South with little or no warning. Ground force structure and composition stress mobility, firepower, and shock action. Motorized and mechanized infantry forces are increasing, new tank battalions are appearing, and the river crossing capability of the North is significantly improving. The NKA has built the world's largest special purpose forces; these forces are capable of penetrating forward areas of the ROK and conducting rear area combat operations against key installations. Finally, the North Koreans are conducting extensive combined arms exercises which could significantly improve their warfighting effectiveness.

The missions of the ROK Army (ROKA) are defense of the country against attack and infiltration, and assistance in the maintenance of internal security. Except for certain equipment deficiencies, ROKA units are considered combat-ready. The ROK Navy (ROKN) is capable of performing its primary peacetime role of patrolling coastal waters, although it is hampered by the advanced age and inadequate speed of many of its ships and the small number of units available for patrolling its 1,500 nautical mile coastline. The ROKN would be at a tactical disadvantage against the NKN during wartime because of the NKN's sizable torpedo boat, missile attack boat, and submarine forces. The ROK Air Force (ROKAF) is a relatively modern, well trained force, with

jet combat aircraft comprising nearly three-fourths of its inventory. However, the ROKAF's main potential adversary, the NKAF, has a numerical advantage in fighter aircraft. With the acquisition of new aircraft, particularly the F-4D, F-4E, and F-5E, ROKAF capabilities to perform in the air-to-air role have steadily improved. Improved electronics and increased operational training will add to the ROKAF effectiveness.

The presence of US combat forces in Korea the past 31 years reflects the US commitment to defend the ROK. There are approximately 37,000 US forces assigned to South Korea. Although US forces are a deterrent to North Korean aggression, rapid augmentation of US forces will be critical should the North Koreans attack.

Conclusion

The US-Soviet military balance in East Asia and the Pacific is shifting in favor of the Soviet Union. As Soviet force modernization and deployments to the region have increased, US warfighting capabilities have slowly decreased. While efforts are underway to strengthen US forces, they will likely have to fight outnumbered in a protracted conventional conflict. US forces face a variety of threats throughout the region, but the area of greatest tension remains the Korean Peninsula, where North Korea maintains significant advantages over the South in nearly every measurable factor of combat strength.

Maritime Balance

During the past two decades, there has been a major shift in the US/Soviet naval balance. The dominant factor affecting that shift was the transition of the Soviet Navy from a basically coastal defense force to a world-wide naval power (Chart II-30). Today the Soviet Union is capable of pursuing a broad range of sophisticated sea-denial missions ranging from anticarrier operations

TRENDS IN SOVIET MARITIME MISSIONS

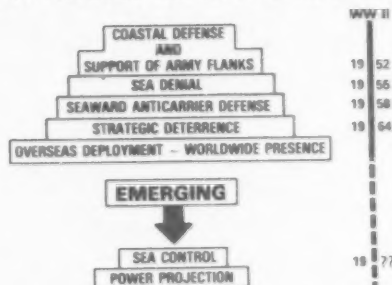


CHART II - 30

to interdiction of SLOCs. While the Soviet fleet has long had large forces for coastal defense, the continuing deployment of increasingly capable ships and submarines to the open oceans is a cause for concern.

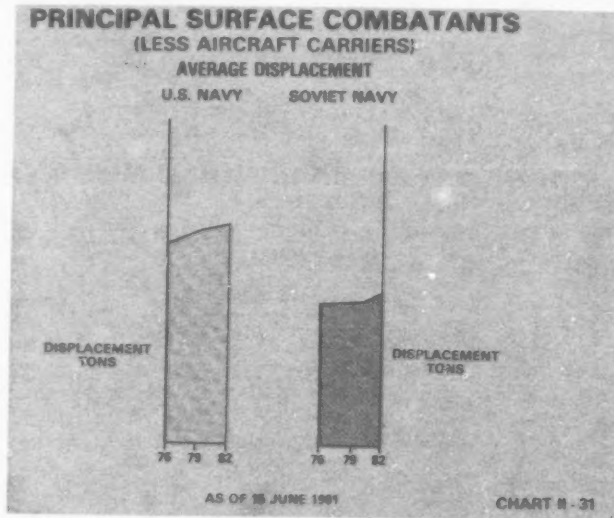
The continuing construction of several classes of major surface combatant ships in large numbers provides the Soviets with the capability to use their fleet as an instrument for global influence. The Soviets have recently introduced several new classes of warships, including their first nuclear-powered surface combatant, the 27,900-ton guided missile cruiser KIROV. By the late 1980s, the Soviets will likely add at least one more of these large cruisers plus a large nuclear-powered aircraft carrier. Three additional new classes of destroyers or cruisers are under construction in Soviet shipyards with lead units of these classes on sea trials. The nature of Soviet surface combatants is changing, yielding a force of larger, more capable multi-mission ships. The average size of US principal surface combatants is also increasing (Chart II-31), however, and the US will retain an advantage in total displacement tonnage.

During the past decade, force levels of the US Navy have declined to the point where the Soviet Navy now has more than three times as many ships as the US Navy. However, part of the Soviet numerical advantage lies in their large numbers of support ships, patrol craft, and mine-warfare ships. Assuming attainment of current force program goals, the US will significantly reduce the Soviet advantage in principal surface combat-

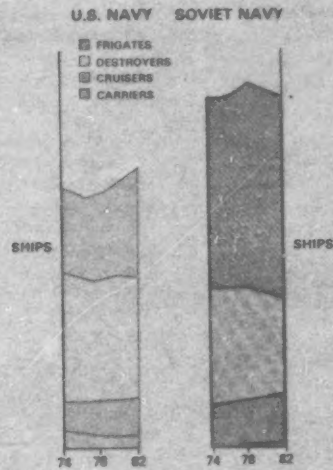
ants (Chart II-32). US offensive capabilities will be significantly increased by reactivation of IOWA-class battleships as cruise missile platforms, introduction of TICONDEROGA-class cruisers, addition of two nuclear aircraft carriers, and the ongoing FFG-7 frigate program. These plans are essential to counter Soviet seapower and support US and allied operations.

Soviet general purpose submarine development continues with the introduction of OSCAR, the largest cruise missile submarine in the world, and ALFA, a titanium-hulled attack submarine of unexcelled speed and deep diving capabilities. Carrying cruise missiles with a range of over 450km, the nuclear-powered OSCAR represents a significant threat to US and allied surface forces. Although Soviet general purpose submarine forces are projected to decline as older, less capable diesel units are phased out, the Soviets will retain a significant quantitative advantage (Chart II-33). US attack submarines maintain overall technological superiority, which partially offsets the larger numbers of Soviet submarines and ASW forces, but Soviet advances in this area bear close monitoring.

Soviet amphibious lift capacity has grown during the past decade and should continue to expand. By the late 1980s, the Soviet Navy should be capable of transporting a force approaching one-half the size of the ground combat and combat support elements within a US Marine Amphibious Force. While the US possesses a substantial margin of superiority in this regard, both in



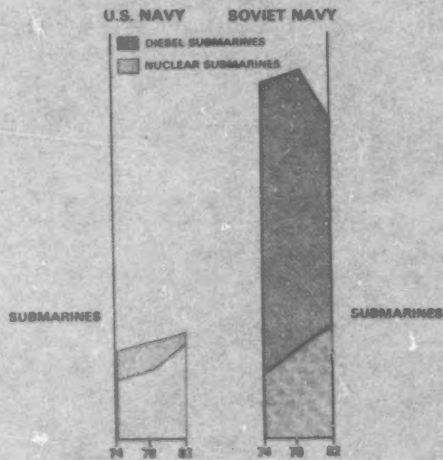
PRINCIPAL SURFACE COMBATANTS



AS OF 15 JUNE 1981

CHART II - 32

GENERAL PURPOSE SUBMARINES*



* INCLUDES APPROXIMATELY 100 SOVIET RESERVE SUBMARINES (CADRE CREW)

AS OF 15 JUNE 1981

CHART II - 33

range and lift capacity (Chart II-34), there are several areas of concern. These include: the prospect of a decrease in amphibious lift capacity if fleet-wide block obsolescence in the 1990s is not precluded; inadequate naval gunfire support; and a significant shortfall in adequate mine countermeasures forces.

Although the US Navy retains a numerical advantage over the Soviets in naval aviation (Chart II-35), capability comparisons are difficult to make since the forces are organized for different roles. In keeping with its mission of sea control, the US Navy has a significant percentage of its aircraft capable of sea-based operations. Combat aircraft are designed for air superiority, attack, and ASW missions. The Soviet Navy has a minimal shipboard fixed-wing capability and relies upon shipborne SAMs and land-based fighters for fleet air defense. Soviet land-based naval aviation strike bombers (390 BACKFIRE, BADGER and BLINDER) carrying antiship missiles, however, represent a significant threat to US naval forces. The continuing deployment of BACKFIRE (approximately 1 per month) will pose a growing challenge to the US ability to operate in sea areas around the world.

The US Navy sea-based air capability could be a significant factor in offsetting the Soviet numerical advantage in major surface combatants and submarines and could be a decisive factor in the contest for sea control. Soviet sea-based naval aviation, however, is growing. In

the 1970s, the Soviets achieved a significant increase in airborne antisubmarine warfare capability and acquired an embryonic sea-based tactical air arm; in the 1980s, they will likely deploy a conventional takeoff and landing aircraft carrier. The continuing growth and development of Soviet naval air power provides an additional asset for opposition to US sea control.

While it is necessary to focus on the surface combatants, submarines, and naval air forces of the US and USSR, it is also important to consider other trends and factors that affect the capabilities of a navy to carry out fundamental warfare tasks, e.g., mine warfare, underway replenishment, geographic constraints, and land-based air support.

Mine Warfare

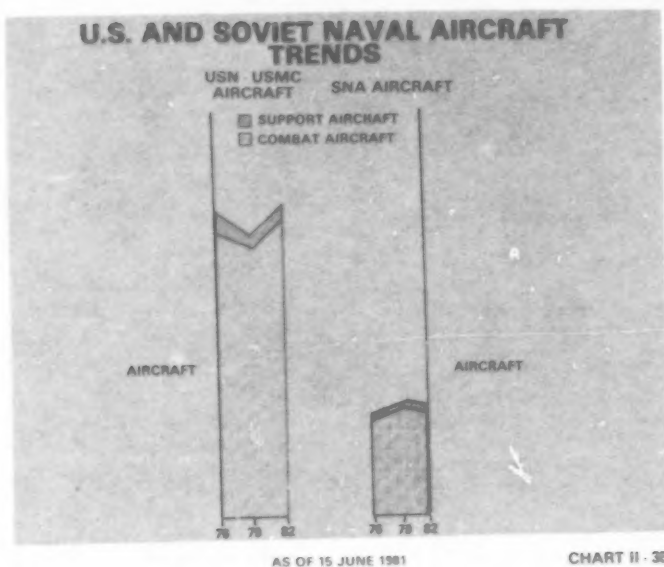
The Soviet Union has the largest stockpile of naval mines in the world. It is estimated that a large percentage of the Soviet surface fleet is capable of laying mines on short notice. Soviet submarines are also capable of delivering mines, and over 300 maritime aircraft (plus an even greater number of Strategic Aviation aircraft) are capable of mine delivery. Although the Soviet Navy lags in the qualitative and technological aspects of mine countermeasures, it has a large force of MCM ships to compensate for technological deficiencies.

Mining by the US and its allies could be very effective because of the geographic restrictions on Soviet access



AS OF 15 JUNE 1981

CHART II-34



to the oceans and the large concentration of submarines in a small number of Soviet ports. The US naval capability to deliver mines resides primarily with aircraft (A-6, A-7, S-3, P-3) and some attack submarines. In addition, the US Air Force has a collateral minelaying function using B-52 aircraft. US MCM forces consist of 25 obsolete ocean minesweepers (22 are in the Naval Reserve Force) and two squadrons of airborne MCM helicopters. A major effort is now underway to upgrade US MCM capabilities; new mine warfare ships are planned for delivery starting in FY 1985. As Chart II-36 indicates, the Soviet Union has a vastly larger mine warfare fleet than the US.

Underway Replenishment (UNREP)

Underway transfer capability is essential for carrying out extended operations at sea. Because of the US Navy's long experience in providing full-service mobile support at sea, the US holds a clear margin of superiority over the Soviets in this area. From all indications, the Soviet Navy has recognized the need for a major improvement in its resupply capability and has intensified its modernization efforts. The BORIS CHILIKIN- and BEREZINA-class replenishment ships represent substantial improvements in Soviet UNREP capability. The KIEV-class V/STOL aircraft carrier and all new classes of principal surface combatants being constructed are also designed to take maximum advantage of these new

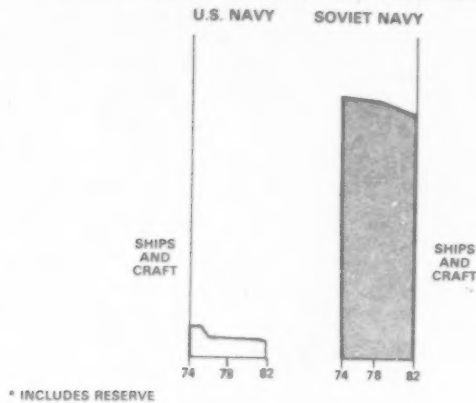
UNREP capabilities. Soviet deficiencies are offset to some degree by the responsiveness of the Soviet merchant fleet in providing logistical support to naval forces.

Geographical Factors Affecting the Maritime Balance

There continues to be considerable debate about the open-ocean effectiveness of Soviet naval forces. Some of this uncertainty stems from geographical constraints on the Soviet Navy. The four Soviet fleets — Northern, Baltic, Black Sea, and Pacific — are widely separated, which complicates their ability to function as a coordinated force. To reach the North Atlantic, the Northern Fleet (based in the Kola Inlet of the Barents Sea) must transit more than 1,500 miles through waters bounded by potentially unfriendly nations. The Baltic Fleet has access to the oceans only through the Danish Straits, which are narrow, mineable, and dominated by Sweden, Denmark, Norway, and West Germany. The Black Sea Fleet can reach the Mediterranean Sea only by transiting the Turkish Straits, which are also narrow, easily mineable, and controlled by Turkey. These constraints could be somewhat offset by pre-hostilities deployment, but this would provide significant strategic warning.

The Soviet Pacific Fleet is concentrated at Vladivostok, on the Sea of Japan, and Petropavlovsk, on the

MINE WARFARE SHIPS AND CRAFT*



AS OF 15 JUNE 1981

CHART II - 36

northern Pacific Ocean. The forces at Vladivostok have ready access to the Sea of Japan, but to reach the Pacific Ocean they must pass through straits close to Japan and South Korea and readily accessible to the US Navy. Although the fleet at Petropavlovsk has easy access to the Pacific Ocean, Petropavlovsk is located on the Kamchatka Peninsula, remote from the Soviet heartland and not easily resupplied by land routes. Thus, the Soviet Navy would have great difficulty in maintaining operations out of Petropavlovsk unless major sea lines of resupply could be sustained—a very challenging wartime task. Map II-3 identifies the geographic constraints on Soviet fleets.

While US fleets, located on both coasts of the continental US and in Hawaii, enjoy unimpeded access to the open ocean and SLOCs, closure of the Panama Canal would restrict the US ability to shift naval forces between theaters. Aircraft carriers cannot transit the canal under any circumstances.

Land-based Air

Soviet Strategic Aviation Forces maintain a large number of aircraft suitable for maritime missions. Many are equipped with air-to-ship missiles suitable for attacking ships. These include the BEAR B and C, BADGER G, BLINDER B, and BACKFIRE.

The US Air Force is assuming a greater surveillance role in support of SLOC defense from key island and coastal bases. Significant progress is being achieved in surveillance and minelaying capabilities. E-3A (AWACS) aircraft stationed in Iceland contribute to the defense of

the North Atlantic SLOC by providing air and sea surveillance of the GIUK Gap. Operating in conjunction with USAF fighters stationed in Iceland and carrier battle group organic air assets, E-3As provide extended surveillance and aerial battle management capabilities for the defense of Iceland and the North Atlantic SLOC. Aircraft from the United Kingdom and Norway also play a key role in the defense of the GIUK Gap.

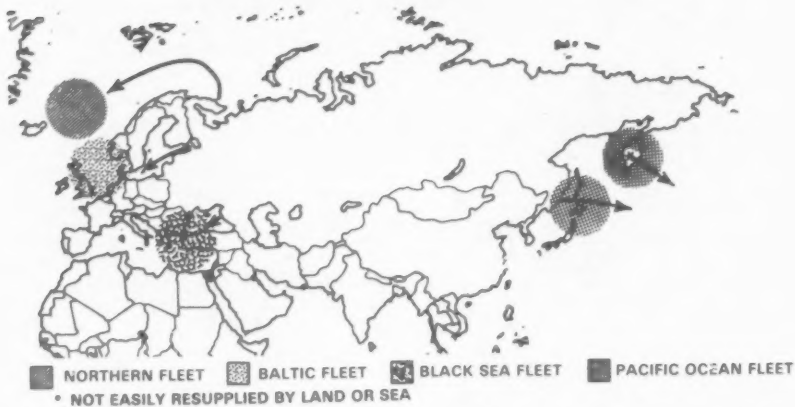
The Strategic Air Command (SAC) is seeking to develop the plans, procedures, and training necessary to integrate the capabilities of the B-52 into maritime operations. The B-52 is well suited for aerial minelaying, since it has the capability to deliver up to 56 naval mines at intercontinental ranges. SAC's sea reconnaissance/surveillance mission is accomplished by long-range SR-71, U-2, B-52, and RC-135 aircraft.

Summary

Declining US Navy force levels and two decades of extensive Soviet investment in maritime forces have resulted in the US losing the essential margin of maritime superiority enjoyed by this nation for the past 40 years. During its evolution from a coastal defense force to a navy with global capabilities, the Soviet Navy has acquired substantial advantages in numbers of ships and submarines, retained its superiority in mine warfare and antiship cruise missile technology, and reduced longstanding US advantages in ASW and naval aviation.

The US Navy, while not having adequate assets to execute all the requirements of a global war, still maintains advantages over the Soviet Navy. Superior naval air

GEOGRAPHIC CONSTRAINTS ON SOVIET NAVAL OPERATIONS



MAP II - 3

power and submarine-quieting and ASW technology, coupled with Soviet geographical constraints and limited underway replenishment capabilities, offset to a degree Soviet numerical advantages in surface combatants and submarines.

While continuing Soviet naval expansion and qualitative improvement remain matters of concern, recent increases in investment in US maritime capabilities should help arrest unfavorable trends. These initiatives must be sustained in order to regain an essential margin of clear maritime superiority.

GENERAL CONCLUSION

Two decades of steadily increasing Soviet military expenditures, coupled with a long period of Western restraint, have allowed the Soviets and their allies and

surrogates to achieve significant advantages in strategic nuclear, theater nuclear, and conventional capabilities. These advantages have led directly to increased risks to free world security, both on a global scale and in regions important to US and allied interests. Recent increases in US defense efforts have begun to arrest and, in some cases, reverse the unfavorable trends, but much more must be done if the US and its allies are to reduce the risks to an acceptable level. In particular, efforts now underway to renew US military strength and encourage other nations to share in the common defense must be continued over the long term. Unfavorable trends that have been developing for many years cannot be corrected overnight or without substantial sacrifice by all threatened nations. Strong US leadership and the sustained support of US defense programs and coalition measures are essential for meeting the challenges ahead.

CHAPTER III: TOPICS OF SPECIAL INTEREST

INTRODUCTION

The foregoing assessments of the military balance have identified many factors that bear on the deterrent and warfighting capabilities of US forces. This chapter addresses several of these factors, identifying problem areas, noting progress, and suggesting initiatives.

To deter and, if necessary, defeat aggression, US military forces must have the capability to fight successfully when, where, and as long as needed. This capability depends on the readiness of US active and reserve forces, the ability to generate additional forces, adequate mobility for projecting combat power to forward areas, and a responsive war-supporting industry. Underlying all of these requirements is the continuing need to create and implement supportive manpower policies and programs.

US-Soviet technological competition, security assistance, arms control and other security related negotiations, and US participation in Sinai peacekeeping efforts merit special review as well.

READINESS OF US FORCES

Readiness — the ability of forces, units, weapon systems, or equipments to deliver the outputs for which they were designed — is essential to the responsive and effective use of US forces for deterrence and defense. There are no simple techniques for measuring readiness; some factors are readily measurable, but others are less tangible and require subjective judgment.

The Joint Chiefs of Staff and military commanders rely upon many means to assess the ability of units to respond when and where needed. The basic tools for measuring readiness are the Unit Status and Identity Report, which provides an authoritative assessment of individual unit readiness, and annual assessments by the commanders in chief of unified and specified commands of their command's ability to perform its missions. Additional reports are used by the Services to evaluate readiness of their respective units. Exercises are an especially important means of assessing readiness because they allow evaluation of a unit's ability to function in combination with other US or allied units.

Combat ratings (C-ratings) are a commonly used, but somewhat limited, indication of unit readiness. C-ratings are determined by evaluating units against criteria in four areas: personnel strength, equipment readiness, equipment and supplies on hand, and level of training. As a rule, a unit's overall combat rating corresponds to the lowest rating achieved in any of the areas. Although

C-ratings provide some utility as a measure of readiness, they do not, in many cases, represent a unit's true state of readiness. For example, relatively few general purpose units ever reach C-1 (fully combat ready), but most can carry out their missions.

Active Forces

Our strategic forces must be ready to respond to an attack with only minutes of warning and, therefore, must meet the most demanding day-to-day readiness requirements. These forces are drilled and exercised continually and maintain a very high readiness posture. US ICBMs and deployed SSBNs are on continuous alert; bombers and supporting tankers also meet stringent alert requirements. Strategic defense and C³ forces, such as AWACS, interceptors, and critical command posts, are also kept at high levels of readiness.

By most measures, the majority of our active general purpose forces are somewhat limited in their ability to fulfill the demanding tasks set out for them, particularly those missions required under general war conditions or where multiple threats must be countered simultaneously. Nevertheless, these forces are prepared to respond to such contingencies as may arise. While the overall readiness of these forces remains less than required because of force structure shortfalls and persistent problems in manning and sustaining the force, forward deployed and other selected early deploying units are generally maintained in higher states of readiness.

Joint and combined training exercises are an especially useful means of assessing the readiness of US general purpose forces. During FY 1981, 86 JCS-directed and coordinated exercises were conducted. Forces of all Services participated in this training, which improved their ability to deploy to the Far East, Europe, Latin America, and Middle East; operate in desert and other extreme environments; command and control a four-Service task force; and link reinforcing units with deployed or pre-positioned equipment. Joint and combined training exercises will continue to play an important role in sharpening the readiness posture of US forces.

The most critical concern with general purpose force readiness is the shortage of qualified military personnel. Within Army units, the most pressing military personnel problem remains the shortage of noncommissioned officers (NCOs) in combat arms, military intelligence, and electronic warfare. The Navy is short of experienced petty officers and officers in billets requiring highly technical skills. All Services are short of pilots.

Major shortfalls in equipment, supplies, and training

also require correction as a matter of urgency. Material shortages have an obvious impact on unit combat capability and an adverse impact on training as well. In some cases equipment pre-positioned in forward areas has been taken from units in the United States, leaving the stateside units short of equipment for training or deployment to other areas. Additionally, the limited funding for fuel and repair parts has impaired training by forcing reductions in ship steaming days, flying hours, and transportation of ground units to field training sites. Readiness of many units, especially ground units based in Europe, has been affected by the lack of areas for realistic field training.

Reserve Forces

Reserve forces are a vital part of the total US military capability. Yet, most ground combat units and surface ships have less than desirable combat ratings. As with the active forces, the most critical problem is a lack of adequate equipment and manpower. Although the total strength of the Selected Reserve has increased each year since 1978, it remains more than 157,000 people short of the peacetime requirement.

Readiness Improvements

Increasing concern with readiness deficiencies has led to a broad range of corrective measures. A major effort has been made to define readiness more clearly and identify areas in which additional resources could have the greatest impact on combat capability. Importantly, shifts in resource priorities have supported efforts to attain higher levels of readiness.

Progress in improving the readiness of general purpose forces has been slower than desired, but recent budgetary actions have resulted in some improvement. The most noticeable improvements stem from enhanced recruiting and retention, a trend which should continue and result in a force with a richer career content. Although current reenlistment rates are among the highest ever experienced, several years of sustained support will be required before the mid-career level shortfalls are overcome. In addition, the austere procurement funding for spares in past years has been reversed and the downward trend slowed to a point where relative stability exists. Continued full funding and procurement are required in order to achieve a significant improvement in this area.

Because of the all-encompassing nature of readiness, there are no quick or easy solutions to these problems. The progress toward improved readiness can be attributed primarily to increased funding and improved personnel programs. Significant pay-offs in terms of readiness must await the outcome of fully sustained programs over the next few years.

MOBILIZATION AND INDUSTRIAL PREPAREDNESS

In conventional conflicts with a major enemy, active units could operate successfully for only a very limited period before requiring augmentation or reinforcement by reserve forces and additional war materiel produced by the US industrial base. It follows, then, that capabilities to mobilize the reserves, expand the forces to the degree necessary, and expand and expedite industrial production are also critical elements of the overall US deterrent and warfighting posture.

Mobilization of Reserve Forces

When mobilized, reserve forces augment, reinforce, support, and sustain the active forces and expand the training and logistical base in CONUS. Reserve forces are essential not only for staying power, but also initial wartime operations. In the event of a major conventional war, large segments of the active forces would depend on some level of mobilization for transport to forward areas, combat augmentation, and logistic support. For example, reserve forces provide nearly half the nation's strategic military airlift and land combat power, and two-thirds of its logistic support capability. The Active Army relies on the Reserve Components (RC) to provide the preponderance of combat support and combat service support units for major operation plans. Chart III-1 shows the Reserve and National Guard contributions to the US total force.

Mobilization Planning

The ability to mobilize is dependent on many mutually supporting actions within the Executive and Legislative Branches, and the non-government sector as well. Mobilization planning is the process by which these actions are developed and coordinated.

Important planning activities were initiated or emphasized by the Department of Defense (DOD) during the past year. The more significant of these activities involved indefinite continuation of peacetime draft registration for 18 year old males; an assessment of the impact of full mobilization on the civil sector and the dissemination of the results to the civil sector; evaluation of the need for new or revised legislation affecting mobilization; determination of the adequacy of the industrial base and actions required to eliminate choke points; and reactivation of the Mobilization and Deployment Steering Group to address critical mobilization issues within DOD. In addition, an Emergency Mobilization Preparedness Board was established within the Executive Branch to address critical mobilization matters in an interdepartmental forum. This initiative, together with those undertaken within DOD, will help in-

REPRESENTATIVE GUARD/RESERVE CONTRIBUTIONS TO TOTAL FORCE

<u>MANNING</u>	<u>NO. (000s)</u>	<u>% OF TOTAL</u>
ACTIVE FORCES	2,064	55
GUARD AND RESERVE UNITS	884	23
PRETRAINED INDIVIDUAL MANPOWER	837	22

FORCES

ARMY

33% COMBAT DIVISIONS
50% ARTILLERY BATTALIONS
60% ARMORED CAVALRY REGIMENTS
67% TACTICAL SUPPORT FORCES

NAVY

14% CARRIER AIR WINGS
88% MINESWEEPERS
35% MARITIME PATROL SQUADRONS
60% MILITARY SEALIFT COMMAND
PERSONNEL

MARINE CORPS

25% DIVISION / WING STRENGTH
29% OBSERVATION AIRCRAFT
34% LIGHT ATTACK AIRCRAFT
33% ANTI-AIRCRAFT MISSILE
BATTALIONS

AIR FORCE

65% AIR DEFENSE INTERCEPTORS
57% TACTICAL RECONNAISSANCE
48% STRATEGIC AIRLIFT CREWS
60% TACTICAL AIRLIFT
34% TACTICAL FIGHTERS

AS OF 30 SEPTEMBER 1981

CHART III - 1

sure that the US is prepared to mobilize its resources in support of defense requirements.

Mobilization Exercises

JCS-sponsored exercises are the principal means of testing and validating mobilization plans and capabilities. These exercises, which are built around realistic scenarios and involve non-DOD agencies and industry, help:

- Determine the adequacy of existing mobilization plans, systems, and procedures;
- Determine previously unidentified limitations in manpower and logistics procedures to support mobilization and initial deployment;
- Evaluate mobilization interrelationships within DOD and among other federal agencies; and
- Assess the effectiveness of deployment planning.

Industrial Base

Any major confrontation with the Soviet Union would place extraordinary demands on war material critical to

sustaining US forces. A strong industrial base, capable of rapid expansion, is therefore critical to both deterrence and defense.

Over the years, there has been little improvement in the capability of the defense industrial base to respond to potential wartime requirements. Drawing upon recommendations of Congress and the Defense Science Board (DSB), DOD has begun implementing an action plan to improve industrial base responsiveness. This plan is placing major emphasis on measures to reduce end item and component lead times. Efforts are underway to develop the capability for production of war reserve materiel to provide specified days of supply within one year of a decision to do so. Funding increases will be necessary for the attainment of new defense industrial base objectives, but policy and legislative changes recommended by the congressional and DSB studies will be required to encourage private investment in the defense industrial base. The new directions proposed by DOD will take several years to implement, but if vigorously pursued should result in a surge capability for selected combat essential materiel and an enhanced US sustaining capability.

A major expansion of the industrial base to satisfy wartime demands involves considerations other than increased investment. Two such considerations are the critical shortage of skilled workers and engineers, and the absence of standby authority for the President to commit funds for additional emergency procurement of critical war materials prior to a declared national emergency or full mobilization. The satisfaction of material support requirements under wartime conditions will depend as well on the availability of critical strategic materials, most of which are inadequately stocked to meet established goals.

MOBILITY

Requirements

The three primary conventional contingencies facing the United States are defense of Western Europe against a Warsaw Pact attack, support of the Republic of Korea against an attack by North Korea, and employment of US combat forces in Southwest Asia to defend vital interests there. Success in all three tasks depends upon mobility forces which can project combat forces rapidly and sustain them as long as necessary to meet US objectives. In each case, US forces would have to travel thousands of miles to the war zone, while enemy forces would have to move only hundreds of miles. Without adequate mobility, combat forces cannot be brought to bear at the point of attack soon enough or with sufficient staying power to influence the outcome favorably.

The Congressionally Mandated Mobility Study (CMMS), provided to the Congress in May 1981, detailed the need for balanced airlift, sealift, and pre-positioning capabilities. Each capability has its special strengths; all are required for adequate mobility (Chart III-2). In general, airlift will transport more than 90 percent of the combat forces delivered during the first 30 days of a crisis. These movements will include equipment and personnel to marry-up with pre-positioned stocks. In an extended crisis, sealift will eventually account for 90-95 percent of the total cargo delivered.

To meet the needs of military mobility, both airlift and sealift forces must possess a number of characteristics. These characteristics include the flexibility to operate in all areas of the world, responsiveness to changing needs of combat, ability to perform and survive near the combat objective, and capability to load and offload military equipment and supplies with a minimum of local support and facilities. Although some military mobility needs can be met by commercial carriers, the features listed above require dedicated military mobility forces for the rapid projection and sustained support of combat forces.

Mobility shortfalls are especially pronounced when multiple, simultaneous contingencies are considered. The increased likelihood of requirements for simultaneous deployment of US forces to multiple theaters underscores the need for significantly improving our mobility posture.

BALANCED MOBILITY

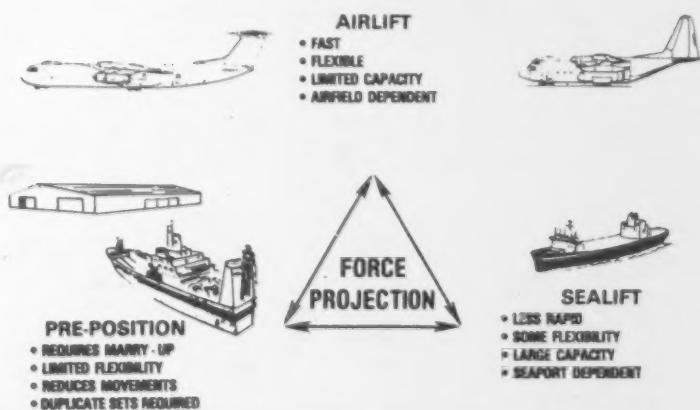


CHART III-2

Airlift Forces

Current airlift forces consist of 70 C-5s, 234 C-141s, 512 C-130s, and 16 C-7s assigned to active and reserve forces plus over 400 commercial aircraft in the Civil Reserve Air Fleet (CRAF). There is adequate passenger lift capability within the CRAF to support most major planned deployments. However, cargo airlift, especially for outsize equipment such as self-propelled howitzers, fighting vehicles, attack helicopters and support vehicles, is less than adequate to meet early deployment and sustainability requirements.

Programs to improve cargo capabilities include the C-141 stretch modification (to be completed in summer 1982), the C-5 wing modification (to be completed by 1987), acquisition of spare parts to support higher C-5 and C-141 wartime utilization rates, acquisition of additional KC-10s, and procurement of additional outsize cargo aircraft. As documented in the CMMS, inter-theater airlift capability should be increased by 20 million ton-miles per day (MTM/D) to provide an adequate capability for force projection.

Sealift Forces

The total US inventory of about 450 military and commercial ships is adequate in terms of tonnage carrying capability. However, the problems of on-berth availability, antiquated ships in the National Defense Reserve Fleet, lack of ships that permit easy onload and offload of unit equipment, and long transit times (most ships have maximum speeds under 20 knots) would prevent the fleet from meeting the time-phased force deployment requirements of major contingencies. The acquisition of the fast SL-7 container ships (TAKR-X) and their conversion to roll-on/roll-off (RO/RO) configuration will help alleviate this situation. The TAKR-X program will provide the capability to deploy heavy land forces more rapidly, delete requirements for more than six division sets of Army POMCUS in Europe, and reduce dependence on foreign bases. However, there is a need for additional fast RO/ROs, fast tankers, and barge carriers to enhance worldwide deployment and reinforcement capabilities.

Pre-positioning

In an effort to overcome the capacity limitations of airlift and speed limitations of sealift, the deployment by some US forces is being supported by pre-positioning unit equipment and supplies in areas of potential conflict. Pre-positioning is not a substitute for airlift or sealift, but complements them, since pre-positioned stocks cannot be put to use without the timely deployment of materials and personnel.

Pre-positioning in Europe is being upgraded by programs designed to fill POMCUS sets for six divisions, improve war reserve stocks, and pre-position equipment for a Marine Amphibious Brigade in Norway. Programs are also underway to increase pre-positioning for potential use in Southwest Asia. The thirteen-ship Near-Term Pre-positioning Force anchored at Diego Garcia in the Indian Ocean contains equipment for one MAB plus stores for 30 days of combat support for the MAB and early arriving Army and Air Force units. Some of these ships will be replaced under the Maritime Pre-positioning Ship program, which by FY 1987 will provide a force containing equipment for three MABs.

Civil Assets

Although military-unique ships and aircraft are indispensable, many wartime and contingency missions can be accomplished by the use of civilian commercial assets. In wartime, over 95 percent of US sealift, 90 percent of US passenger airlift, and 40 percent of US cargo airlift would be provided by the civil sector. Further, most cargoes leaving the CONUS would be handled through civilian terminals. Because these contributions are essential to the successful execution of US operation plans, the health of the transportation industries, especially those which would provide intertheater mobility assets, must be maintained. Further, rapid access to these resources in times of crises must be assured.

Intratheater Mobility

Movements within a theater are as critical to mission success as the movements to the theater. The ability to move forces and sustain combat operations is highly dependent on the establishment of a viable theater transportation system. Intratheater movements are supported by surface and air assets. The majority of a ground force's transportation is normally provided by organic capability — the unit's own vehicles and aviation assets. However, most units are not totally self-mobile and require support from transportation units, intratheater airlift, intratheater sealift, and, where available, host nation resources. The mode of transportation used would be a function of tactical urgency, terrain, distance, lift availability, and movement priority. Some requirements are predetermined in theater war plans and identified for air or surface movement; however, most requirements cannot be accurately predicted since they will depend on the needs of the immediate tactical situation.

Success in a Southwest Asia contingency would depend on the forward movement of forces from aerial and sea ports of debarkation and the capacity to distribute supplies and equipment over intratheater LOCs. Without an adequate intratheater airlift capability,

forces moving within the theater would be restricted to a limited surface network. However, current intratheater airlift forces are deficient in total capacity and lack an outsize capability.

Peacetime Readiness

For mobility forces to be ready for war, they must train for war. Joint and combined exercises provide the most realistic training environment for the deployment and sustainment of combat forces. Such exercises provide opportunities to practice the coordination between mobility and deploying combat forces, plan the orderly flow of personnel and equipment to and through ports, and actually load and maintain transport aircraft and ships. These exercises are critical to the prevention of delays during actual crises.

The responsiveness of mobility forces is being enhanced by the establishment of the Joint Deployment System (JDS). This system, which is being developed by the Joint Deployment Agency, is designed to link lift users with the National Command Authorities and transportation operating agencies. The JDS will provide an increased capability for changing force allocations, scheduling lift requirements, and altering planned force deployments.

Seaport and Airport Operations

The overall effectiveness of mobility forces is highly dependent on the speed and ease of loading and unloading operations at ports of embarkation and debarkation. The availability of modern, deep water seaports and large, well equipped airports in contingency areas can be of great advantage for rapid response and sustained operations once conflict has begun. Such facilities must be adequately supported by host nation personnel and defended against enemy interdiction or sabotage.

Well equipped seaports and airports, however, may not be available in the crisis region or, if available, may be subject to degradation by enemy action in spite of defensive measures. Therefore, military airlift and sealift forces must have the capability to conduct cargo and personnel transfer operations at austere ports with a minimum of fixed facilities. The capability to operate at austere ports depends on a number of factors, including ships or aircraft with roll-on/roll-off and other self-sustaining loading equipment. These military-unique needs must not be overlooked in the development and acquisition of airlift and sealift assets.

Summary

US military strategy calls for a mobility force capable of global power projection. Nevertheless, mobility

forces, which account for three percent of the DOD budget, will have only a limited capability to provide the timely force closures required. Uncertainties associated with possible contingencies suggest an increased demand on military transportation systems and underscore the requirement for speed and flexibility. New mobility assets must have capabilities which provide responsiveness, ease of loading, and adaptability for operations in austere locations. Enhancements to inter-theater and intratheater mobility are essential for the effective employment of combat forces.

MANPOWER

The military forces of this nation shoulder uniquely demanding responsibilities — the defense of the United States and the protection of its worldwide security interests. To meet these imperatives, military personnel must train vigorously, endure hardship, deploy overseas and, when necessary, fight. The nation's fighting strength is in its people — their individual readiness and personal commitment to accomplish the defense mission in peace and in war.

From the inception of the All Volunteer Force (AVF), considerable attention has focused on a limited number of measurements for indications of its success or failure. Manpower end-strengths, in particular, have served as the principal measure of AVF success. Much of the DOD management effort, therefore, has been devoted to initiatives which improve recruiting and retention. This attention has had two principal effects on manpower programs. First, manpower management practices have been adopted without full consideration of their impact on the overall manpower requirements of all the Armed Forces. Second, there has been insufficient sensitivity to those initiatives which are not directly related to recruiting and retention, but which are crucial to discipline, esprit, cohesiveness, and readiness. The military must continue to depend on leadership, unity, cohesiveness, shared expertise, tradition, and continuity of command if it is to remain a viable fighting force — those characteristics which mark the military institution as something special.

The military profession cannot be seen as just a job — a source of income or training — for the pursuit of goals unrelated to national defense. In return for selfless service and personal sacrifices, military personnel expect and deserve a quality of life reasonably comparable to that enjoyed by the society they protect; a strong system of institutional support to fortify their dedication and loyalty and nourish the unit cohesiveness, personal readiness, and teamwork essential in battle; and a stable, predictable pay system. Too often, desirable manpower programs have been reduced without adequate consideration of the organizational impacts.

Manning the Active Force

Population trends forecast that by 1990 the number of 17-21 year old males, the primary recruiting pool for military service, will decline to approximately 9 million from the peak of 10.8 million in 1978 (a decrease of 17 percent). This smaller male cohort means more intense competition for high school graduates among colleges, vocational schools, private employers, and the military. If educational institutions are able to prevent a decline in enrollments and private employers continue to hire young workers, as expected, the availability of enlistees for military service could decline by greater percentages than represented by population trends.

The competition for quality personnel will be even more intense than the competition for quantity. At the same time the military Services are increasing their demands for the highly skilled, other demands for these same personnel will be multiplying. Thus, the attraction of quality personnel will continue to be a critical factor for accessions in the future. To assist in attracting the required quality personnel, a new education incentive program is needed. The program must be capable of competing for people desiring to further their education with the many federally funded grants and loans, which do not presently carry the requirement for public service. Desirable features of such a program would in-

clude a tiered level of benefits, which would provide an initial entitlement as a recruiting incentive followed by an enhanced benefit for additional service; transferability of unused benefits to spouses or dependents; transition feature for personnel with the old GI Bill; and a delimiting date of 10 years after separation or retirement.

The recruiting trends for the active force reflected in Chart III-3 are encouraging. Quality, as measured by percentages of high school diploma graduates, is on an upward trend, with the Services having recruited 81 percent high school graduates in FY 1981 after a five year low in FY 1980 of 68 percent. The number of Category IV new personnel decreased from 31 percent in FY 1980 to 18 percent in FY 1981.

With regard to reenlistment for the active force (Chart III-4), first term retention rates of 43 percent exceed those of any year since inception of the AVF. Career reenlistment rates also increased (Chart III-5) after FYs 1979 and 1980, the lowest years since the draft was discontinued. Overall, the total reenlistment rates (Chart III-6) compare favorably with similar rates since 1972. Of concern, however, is the high number of critical skill personnel who elect not to reenlist. These critical skills involve technical expertise, highly desired within both the civilian job market and the combat arms. Examples of these shortages are displayed in Chart III-7.

DOD RECRUITING
(% OF OBJECTIVE ACHIEVED*)

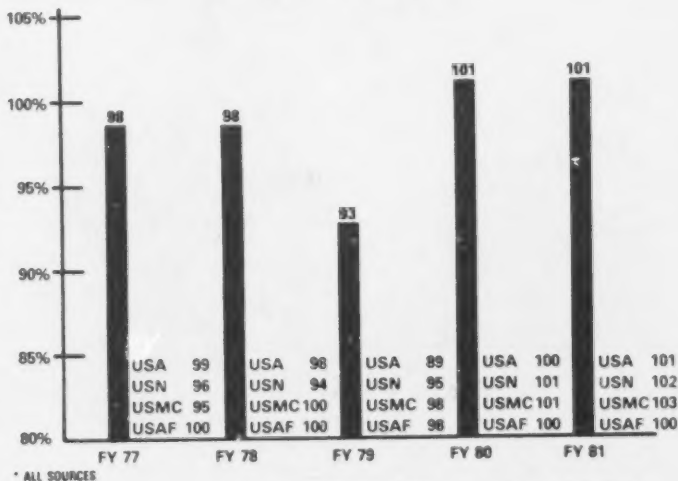


CHART III - 3

DOD FIRST TERM REENLISTMENT (% OF ELIGIBLES)

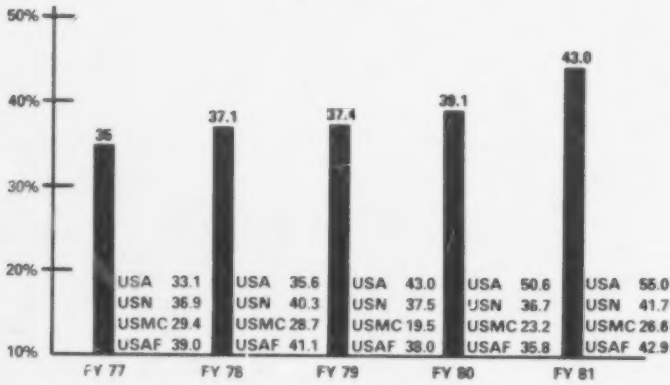


CHART III - 4

DOD CAREER REENLISTMENT (% OF ELIGIBLES)

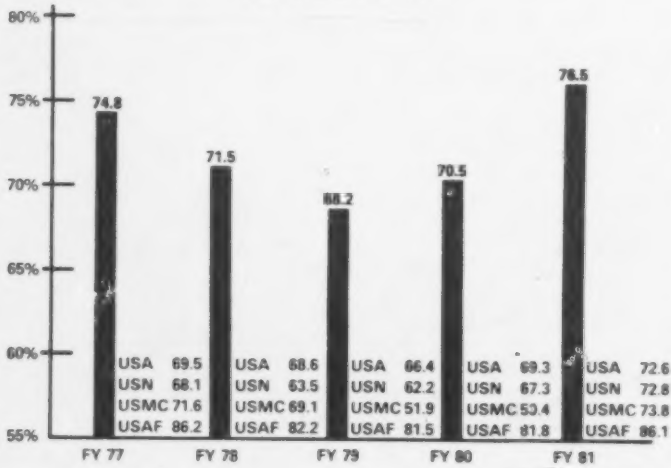


CHART III - 5

DOD TOTAL REENLISTMENT (% OF ELIGIBLES)

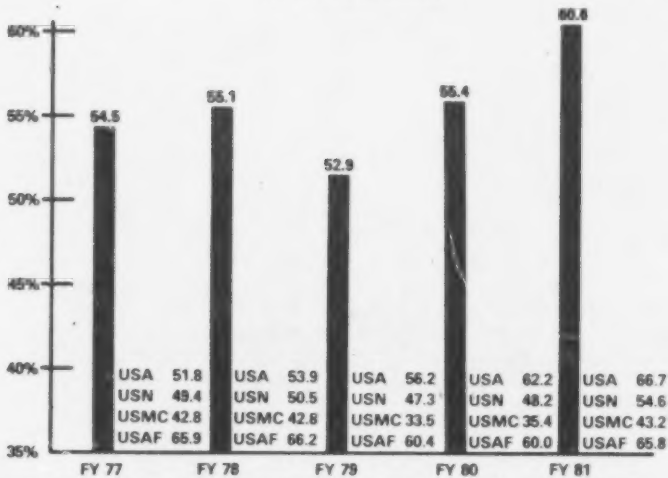


CHART III - 6

REPRESENTATIVE SHORTAGE ENLISTED CRITICAL SKILLS

ARMY	SHORTAGES
• COMBAT ARMS NCOs	10%
• MILITARY INTELLIGENCE NCOs	20%
• ELECTRONIC WARFARE MAINTENANCE NCOs	44%
NAVY	
• AVIONICS PETTY OFFICERS	22%
• PROPULSION ENGINEERING PETTY OFFICERS	26%
• COMBAT SYSTEMS PETTY OFFICERS	27%
AIR FORCE	
• AIRCRAFT SYSTEMS MAINTENANCE NCOs	23%
• MISSILE MAINTENANCE NCOs	26%
• AVIONICS SYSTEMS NCOs	29%
MARINE CORPS	
• AIR CONTROL/ANTIAIR WARFARE ENLISTED PERSONNEL	21%
• SIGNAL INTELLIGENCE ENLISTED PERSONNEL	32%

AS OF 30 SEPTEMBER 1981

CHART III - 7

Active duty manpower demands will increase by about 8 percent or 162,000 between FY 1982 and FY 1987, a period during which the 17-21 year old male population will decline. In addition, Congress has imposed constraints on the quality mix of recruits. Although the constraints took effect in FY 1981, they become increasingly stringent through FY 1983. Recruiting and retention, of course, will determine the extent to which the force can be sustained or expanded. Accession requirements alone do not necessarily increase as the force grows, because the Services have programmed increases in the size of the career force, which will partially satisfy the increased personnel demands for an expanded force. Based on current projections, all Services are likely to experience problems in meeting recruiting goals with the quality of people necessary to accomplish the mission. Projections suggest that all Services will meet or exceed their programmed career force levels over the period.

A cautionary note is in order, however. Recruiting and retention trends for the active force have been favorable because of enacted and anticipated incentive packages, increased recruiting resources, and the state of the economy. A reduction in the resources necessary to attract and retain military personnel or an improvement in the nation's employment picture could adversely affect this trend.

Civilian Personnel

Since 1974, repeated reductions in the civilian work force, particularly in base operations and the wholesale supply and maintenance areas, have had a direct impact on the ability to support forward deployed forces and carry out peacetime operations. These reductions have occurred during the same time when reliance on service provided by civilians has grown. While there has been some improvement since FY 1980, the necessity to continue to perform normal functions results in the diversion of skilled military personnel to perform jobs temporarily that should be performed by civilians. This diversion and the loss of the civilian workers themselves result in decreased unit readiness and individual morale.

The Services are nearing the maximum numbers of military-to-civilian space conversions which can be absorbed because of previous conversions, contracting out, and other constraints, e.g., use of civilians in combat, protection of the rotational base, and imposition of congressional or budgetary restraints on numbers of civilians. It is essential that the true civilian requirements of peacetime operations and increased requirements resulting from mobilization and deployment be recognized and funded.

The civilian end-strength ceilings should be removed

and the Services allowed to manage the civilian labor force within constraints of the annual appropriations act. Presently, however, the Services are short approximately 135,000 civilians to perform current peacetime support functions and provide an acceptable basis for mobilization.

A key problem facing civilian personnel management concerns the retention in overseas areas of critical DOD civilians and contractor personnel following mobilization or hostilities. These employees, including those assigned to critical jobs, may have to evacuate overseas areas with other noncombatants in the event of mobilization or hostilities. Initiatives and programs that would grant the overseas commander greater discretion in retention of US civilian employees must be supported.

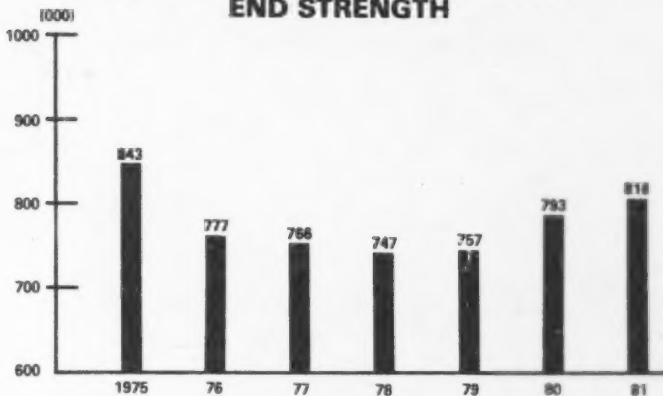
Reserve Components

The Selected Reserves provide a significant portion of the fighting capability of the Armed Forces. The figures in Chart III-8 show a continued growth in strength, but the Selected Reserves are still more than 200,000 below the FY 1981 requirement of 1,040,000 — primarily in the Army National Guard and Army Reserve, although critical skill shortages exist in the Air Reserve Forces. Another category of the Ready Reserve is the Individual Ready Reserve (IRR), which upon mobilization would augment understrength active, National Guard and reserve units and replace initial combat casualties. The strength of the IRR has increased by almost 80,000 since its low point in 1978. However, even with the current 420,000 in the IRR, there is a shortfall of 250,000 to 300,000 trained personnel at about 90 days after mobilization. Currently approved programs to increase the supply of pre-trained personnel will still leave an Army shortfall in FY 1987 of approximately 55,000 at 90 days after mobilization. A comprehensive program to eliminate the remaining shortfalls is under development.

Compensation

The philosophy of compensation is based on the idea that those who wear the uniform have a primary military function, and that this function is equally important for each given Service and grade, whatever specialization a member may have. Thus, a common basic pay table forms the foundation of the military compensation system, and progressive military knowledge, demonstrated excellence, and experience gained from Service tenure should be recognized. Unique institutional supports and the special and incentive pay structures are built upon this foundation. These supports and structures enable the Services to apply specifically targeted incentives when and where needed to attract and retain personnel possessing technical or unique skills which are highly transferable, or which have high demand in the private

SELECTED RESERVE TRAINED UNIT END STRENGTH



AS OF 30 SEPTEMBER 1981

CHART III - 8

sector. The 96th Congress in 1980 and 97th Congress in 1981 passed significant legislative initiatives affecting military pay. The 11.7 percent military pay raise in FY 1981 and 14.3 percent overall increase in FY 1982 redressed the financial caps imposed from 1975-1979 and restored military compensation to roughly the relationship with the private sector that existed at the beginning of the AVF. The key to maintaining military pay comparability is to establish a stable, visible military pay raise adjustment mechanism tied to independently developed index data for comparable types of work and levels of responsibility in the private sector. The Services will face a continuing need to update special and incentive pay initiatives to alleviate critical skill retention problems.

There is also a need to eliminate the substantial negative compensation experienced by military members ordered to make a permanent change of station (PCS). In light of the significant costs associated with these moves, PCS travel should be recognized as an integral part of the military mission and the costs of performing this travel considered a part of doing business, not additional compensation to military members.

Another equally important concern is to insure the stability of the military retirement system. Members plan and serve careers with the understanding that, upon retirement, a stable program will exist to assist in maintaining a quality of life earned during their active service. The attempts of the past two years to modify the retirement system through the annual appropriations process undermine the required stability and effec-

tiveness of this important feature of the military compensation system.

Quality of Life

Quality of life is a broad concept that encompasses the degree to which an individual's or a family's human needs are satisfied. This concept is based on the principle of reciprocal obligations between the nation and the military member. Military personnel and their families merit a life style commensurate with the demands and sacrifices imposed upon them. Meeting family needs, such as full medical and dental services, housing, legal support, dependent education, child care, financial planning, and a reasonable standard of living, is an eminently fair concept that contributes to retention, productivity, and the constructive attitudes of Service members.

Health care is a basic requirement for Service members and their families. Programs which improve military health care by providing in-house medical care for dependents and retirees must be supported. Improvements to the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS) program are also urgently needed. Most significantly, a cost-sharing dental care program for dependents and retirees would enhance the military health plan and be consistent with the growing trend toward expanded paid health care plans in the private sector.

TECHNOLOGICAL LEADERSHIP

The United States has held a general technological

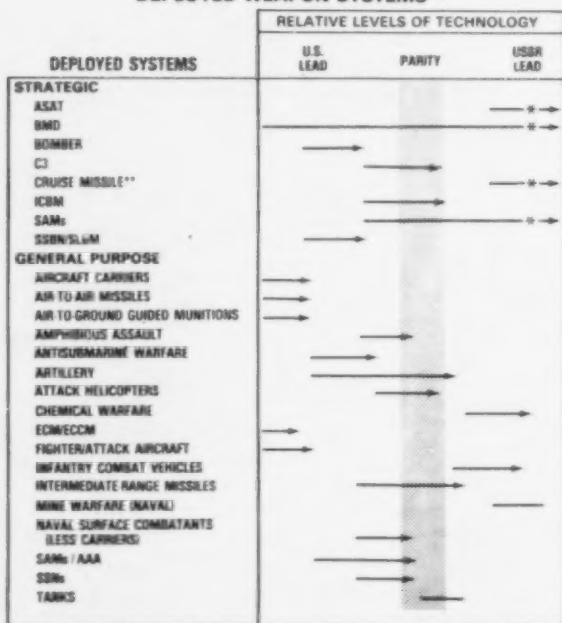
advantage over the Soviet Union for many years. As a result, most US weapon systems have been more capable than their Soviet counterparts and thus able to compensate, in part, for Soviet numerical superiority. The US still holds an advantage, but the areas in which it leads are fewer than a decade ago.

US-Soviet Comparisons

Soviet gains in the relative quality of weapons and other military systems may be attributed to at least three factors. First, the Soviets have displayed great determination to catch up and have invested heavily in basic and applied technology. Second, the US has tended to lag behind the Soviets in investment in these areas, partly because of the mistaken notion that the Soviet Union is interested only in fielding large numbers of relatively unsophisticated weapons. Third, the USSR has skillfully exploited the transfer of technology from the US and other industrially advanced countries.

The Soviet Union has become strongly competitive with the US in important areas of basic technology and gained significantly in many more. While the US was clearly superior in most areas of basic technology in 1970, it now faces a major challenge. Because several years usually elapse between the advent of a new technology and its application in the field, the full effect of Soviet advances in the 1970s has yet to be felt. Chart III-9 displays trends in relative levels of technology achieved in the most modern deployed US and Soviet systems. The Soviets have advanced most dramatically in the strategic arena, but have registered impressive gains in other areas as well. This chart does not tell the whole story, however. Not only have the Soviets generally increased the relative sophistication of their military equipment, but they have placed new systems in the field at a higher rate than has the US. Thus, on balance, the US technological lead is less than a comparison of the newest equipment would suggest.

CHANGES SINCE 1970
DEPLOYED WEAPON SYSTEMS



KEY: ARROW DENOTES DIRECTION AND EXTENT OF CHANGE. LINE WITHOUT ARROWHEAD DENOTES THAT THE RELATIVE LEVELS OF TECHNOLOGY ARE UNCERTAIN BUT ARE NOT CHANGING.

* NO U.S. DEPLOYED SYSTEMS

** U.S. ALCM SYSTEM IOC DEC 82

AS OF 30 SEPTEMBER 1981

CHART III - 9

Maintaining US Leadership

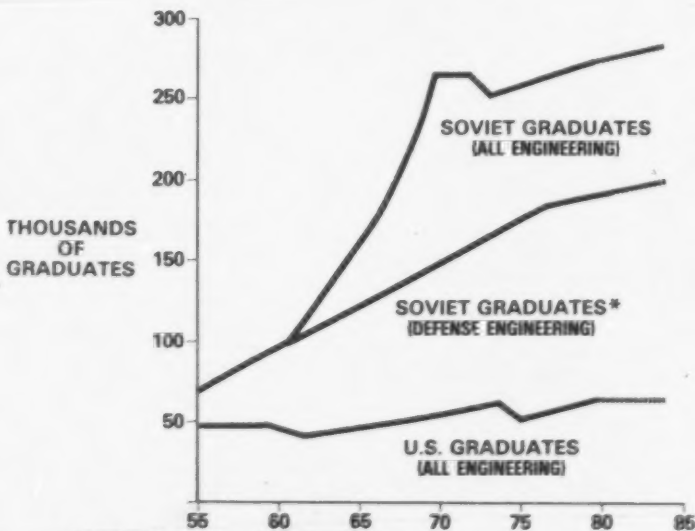
Because the Soviet Union gives no sign of relaxing its historic reliance on masses of men and equipment to prevail in war, the US must maintain a lead in military technology. Maintaining this lead will be difficult, however, since the USSR is making a determined and successful effort to reduce it. To keep the lead, and if possible to extend it, the US must do more than make judicious choices in military research and development. The US must also insure that its technological community remains the best in the world, that it can avoid excessive delays in fielding new technologies, and that it does not sacrifice hard won technological advantages except in cases that clearly serve the national interest.

Technological Community

Technological leadership depends fundamentally on the quality and quantity of people committed to achiev-

ing it. Since World War II, the US scientific and engineering community devoted to national defense has been acknowledged the world's best. This situation is changing. Today, the United States has about 600,000 full-time scientists and engineers engaged in all types of R&D, the Soviet Union about 900,000. Although the productivity of the typical Soviet scientific worker may still be less than his US counterpart, there is a trend toward parity. More worrisome still, the US educational system is yielding only about 50,000 engineering graduates per year, and relatively few of them are moving into defense related work. The Soviet Union, on the other hand, graduates over 250,000 engineers per year, of which some 200,000 move into military oriented work. These trends, depicted in Chart III-10, could have a profound effect, over time, on the US ability to maintain its technological lead. Recognition of this challenge to the US R&D advantage is the first step toward strengthening a most basic aspect of US security.

**UNDERGRADUATE ENGINEERING
U.S. AND SOVIET**



* COMPARABLE DATA FOR U.S. DOES NOT EXIST
SOURCE: NATIONAL CENTER FOR EDUCATIONAL STATISTICS

AS OF 30 SEPTEMBER 1981

CHART III - 10

Fielding New Technology

To maintain an effective technological lead, the US must insure that systems incorporating new technologies can be fielded in time to meet actual or anticipated threats. In recent years, shifting commitments and funding priorities have greatly hampered US development efforts. As a result, US industry has grown reluctant to invest significant research and capital in costly, sophisticated systems. Industry cannot be expected to assume such risks without assurance that its sole customer is committed to procurement of systems produced at logical and economical rates. Firm commitments and multi-year procurements can provide some of the needed assurances as well as reduced costs. In addition, the decision process for weapon system development and acquisition contributes to long lead times between concept definition and system deployment. Stable resource priorities must be set and balanced within the operating Service, Department of Defense, and Federal government as a whole. Research, development, and testing must provide decisionmakers with adequate confidence that systems will perform as designed and provide capabilities commensurate with investments. The prime determinant of military systems development remains the need to confront threats successfully when and where they emerge.

Promising Technologies

The United States must devote whatever human and material resources are necessary to insure its security, but this requirement should not demand the US match Soviet expenditures of money and manpower in all areas of defense related technology. Rather, the US should concentrate its efforts on those technologies which promise to yield the most meaningful military advantage. Two such areas are microelectronics and lasers.

Microelectronics will continue to be a key element in the improvement of performance and reliability of US weapon and support systems. Advances in this field are proceeding rapidly and provide the US with its single greatest technological advantage over the USSR. The Very High Speed Integrated Circuits program now conducted by the Army, Navy, and Air Force will produce two more generations of very large scale integrated circuits. Studies have shown that these circuits will reduce the size and weight of electronic "black boxes" by a factor of five to ten, yield significant improvements in reliability, and greatly reduce acquisition and support costs. This new technology is crucial to technological competition, since it will permit the US to build digital processors of greatly increased speed and capacity. These processors, in turn, will lead to advances in weaponry; sensors; electronic warfare systems; and command, control and communications.

Lasers are perhaps second only to microelectronics in their promise of impact on military systems. The United States and the Soviet Union both are devoting much effort to this technology, and many important applications have reached the field. Lasers employed directly for military purposes may be divided into two categories: those used for data transmission, measurement, and improving the effectiveness of otherwise conventional weapons and those which use laser energy to damage or neutralize military targets. Operational applications to date fall into the first category and include range-finding for aerial and surface gunnery and target designation for bombs and other projectiles. One of the latest applications is the COPPERHEAD, an antiarmor, artillery-fired projectile that achieves great accuracy by riding a laser beam to its target. Other new military applications include coherent optical radar and high-capacity, highly jam-resistant communications. The most dramatic role for lasers, however, lies in the potential use of these devices as weapons in their own right. US programs have demonstrated already that lasers could achieve thermal kill of aircraft and airborne missiles.

The great impact of microelectronic and laser technology derives not only from the potential they hold for US capabilities, but for Soviet capabilities as well. The US clearly leads in the field of microelectronics and computers, but Soviet progress has been substantial. The Soviets have a growing computer industry and are steadily increasing the electronic sophistication of their military forces. Soviet progress in laser technology is even more impressive. The Soviets have worked in this field as long as the US and appear to possess expertise and resources at least equal to those in this country. The Soviet high-energy laser program is three to five times as extensive as the US effort and is tailored to the development of specific laser weapon systems.

Technology Transfer

Soviet gains in technological capability have depended considerably on technology transfer from the West. In addition to being the source of much of the Soviet Union's electronic and computer technology and manufacturing know-how, the industrialized free world has supplied the Soviet Union in the past decade with billions of dollars worth of efficient machine tools, transfer lines, chemical plants, precision instrumentation, and associated technologies. These transfers have played a major role in the modernization and expansion of Soviet industry. Western equipment transferred for peaceful uses permits the Soviets to apply equal or better equipment to the military sector and, at the same time, relieve pressures arising from civilian consumers. The remaining Western advantage in technology imparts important leverage for translating limited re-

sources into military capability, and still provides a necessary offset of Soviet quantitative superiority. That advantage must not be lost.

SECURITY ASSISTANCE

In the face of growing challenges and hostility, the US alone cannot provide all the military strength and resources to meet threats to its security interests and those of friends and allies. However, by assisting selected nations to acquire, use, and maintain the capability to defend themselves, the US can enhance collective security and the integration of US, allied, and friendly military forces in opposing common threats. The transfer of defense articles, services, and training to nations whose security objectives are compatible with US interests benefits both the US and the recipients.

Security assistance is a vital component of US national security and foreign policy. US security assistance programs serve as a means for sharing the burden of free world security and provide a tangible, visible relationship with countries of strategic importance to the United States. The international relationships that derive from security assistance can strengthen US military capabilities and improve the US global defense posture. Access to overseas bases and facilities by US forces, for example, frequently hinges on the US ability to provide reasonable levels of assistance to friends and allies. The transfer of military equipment and services and provision of low cost training help the US meet the security concerns of friends and allies and encourage stability which can lead to the peaceful resolution of disputes. Also, the long-term influence of security assistance programs can be considerable. Professional military training can enhance friendly force development and influence future military leaders of the recipi-

ent nations. Given the propensity of professional military officers to serve in positions of leadership in many of the nonaligned nations, foreign military training is a particularly cost effective instrument of US policy.

The US Security Assistance Program

The US currently provides defense articles, services, and training on a cash sale, financing, or grant basis to 104 nations. Although the bulk of US security assistance is now in cash sales, there are three other major security assistance programs:

- The Foreign Military Sales Financing Program furnishes credit and loan repayment guarantees to enable eligible foreign governments to purchase defense articles, services, and training.
- The Military Assistance Program (MAP) provides defense articles and services, other than training, to eligible foreign governments on a grant basis.
- The International Military Education and Training (IMET) Program provides training in US schools to foreign military and related civilian personnel on a grant basis.

Although the dollar value of US military related exports has risen over the long term, the ratio of separately budgeted security assistance to the US defense budget has declined from a high of 9.5 percent in 1950 to under 2 percent today (Chart III-11). This reduction in the relative contribution of security assistance to overall US defense interests contrasts sharply with the continuing emphasis on coalition efforts for maintaining free world security. Chart III-12 depicts the long-term trends in grant military aid and foreign military sales (FMS). As shown on the chart, FMS increased sharply in the 1970s

RATIO: SECURITY ASSISTANCE/DEFENSE BUDGET
(CONSTANT FY 1982 DOLLARS)



CHART III - 11

GRANT*/FMS PROGRAMS** **FY 1950 - 1981** **(CONSTANT \$ - FY 1981)**

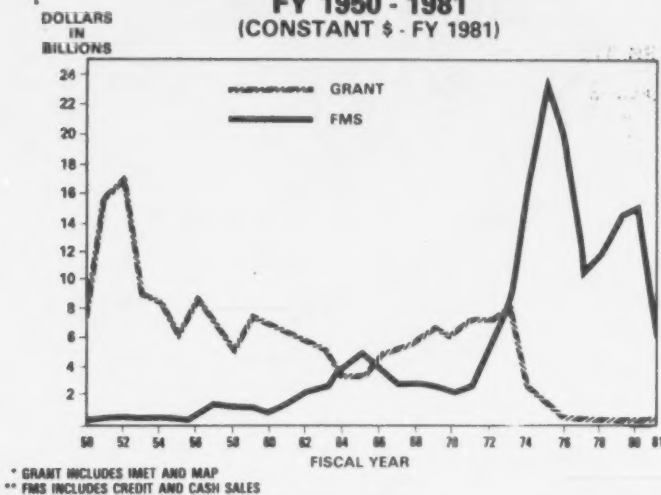


CHART III - 12

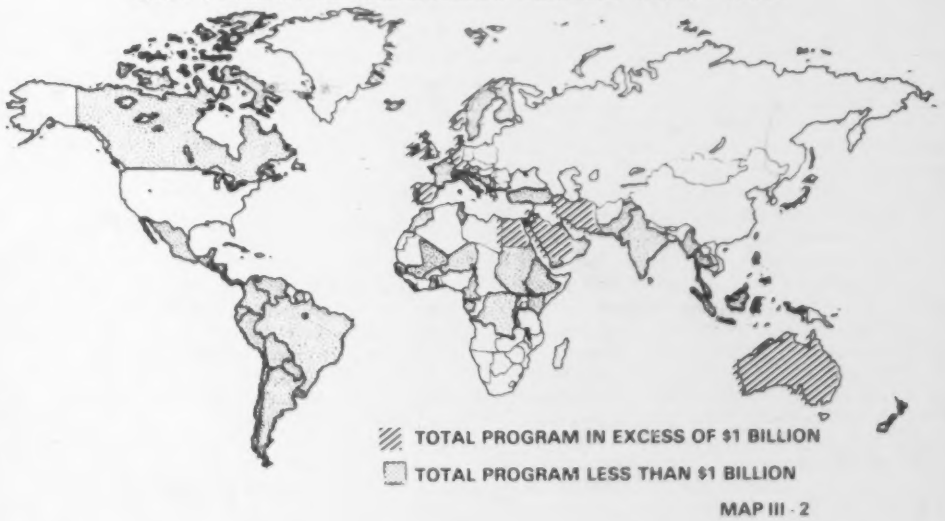
as reliance on MAP and IMET grants was severely reduced. Many recipients have had difficulty in adjusting to the shift from MAP to FMS, especially in view of higher energy prices, high interest rates, and the increased cost of military goods and associated services. Dollar value restrictions, selected prohibitions, and arms export restraints of the late 1970s also had a debilitating effect on US military assistance efforts.

In recognition of the contributions of security assistance to important foreign policy and security objectives, the FY 1982 security assistance program has been increased substantially over previous levels, thus reversing recent adverse trends. Even though the FY 1983 program proposes further increases, additional steps need to be taken to enhance the effectiveness of security assistance as a means of achieving US objectives. In particular, the realities of high-cost defense technology, inflation, and pressing self-defense requirements dictate increased use of grant economic and military assistance and more liberal FMS credit terms and repayment periods. There is an increasingly critical need to reexamine security assistance provisions which limit the US ability to use the program with the flexibility demanded by security challenges of today and tomorrow. The restraints on the manning level and functions of overseas security assistance organizations is of continuing concern, since these elements are vitally important to the

management of assistance programs and dialogue on training, planning, operations, and host nation support. Additionally, expanded IMET funding levels would increase the training available to US allies and other friendly nations at a time when cooperative planning and combined approaches to mutual threats have become more critical to free world security. Finally, the value of US security assistance programs would be enhanced greatly by the extension of current legislative authority for incremental pricing of IMET to all FMS training. Such an extension would help offset the adverse effects of inflation and help correct the perception that the US charges what appears to be excessive prices for its training.

The USSR and Security Assistance

The value of security assistance across the entire range of political, economic, military, and social relationships has not been overlooked by the Soviet Union (Map III-1). In recognition of the role of security assistance as a low cost investment and instrument for achieving political objectives, the Soviet Union has substantially increased its assistance programs over the past decade. In 1980, the Soviets exceeded US arms sales (Map III-2) by at least an estimated \$4.5 billion and established a dominant lead in sales of major fighter, tank, and artillery weapon systems to the Third World. Soviet arms deliveries have kept pace with increasing

USSR ARMS SALES 1974 - 1980**U.S. FOREIGN MILITARY SALES 1974 - 1980**

sales. In 1980, deliveries were the second highest on record as a result of sealift capability improvements, particularly the upgrading of cargo handling facilities at Nikolayev on the Black Sea.

As an adjunct to direct assistance efforts, Moscow uses its client states as conduits for arm transfers when deemed more appropriate to fulfill political objectives. Designed primarily to support guerrilla activity and influence areas such as Africa and Central America, the sales efforts of Soviet client states amounted to over \$2.0 billion in 1980. The Soviets are expected to continue to use direct and surrogate military assistance and arms sales to boost hard currency earnings and gain influence in Third World countries.

ARMS LIMITATION AGREEMENTS AND NEGOTIATIONS

Equitable and verifiable arms control agreements can contribute to the achievement of security at reduced costs. While that goal remains the preferred outcome, the United States should operate from the principle that it can negotiate successfully with the Soviet Union only if it demonstrates clear and unmistakable evidence of national resolve to redress the military imbalance. It is important to stress for future negotiations that arms control is not a substitute for force modernization — arms control and other defense efforts should be mutually reinforcing.

Strategic Arms Reduction Talks

The United States is reviewing its overall strategic arms policy in preparation for opening such talks in 1982. The Joint Chiefs of Staff believe that actions to redress the strategic imbalance through necessary force development should, where feasible, be complemented by equitable and verifiable arms limitations. Sound arms control measures could help bound the threat and render the costs of defense and the allocation of critical resources more manageable.

The Joint Chiefs of Staff are active participants in the review of US Strategic Arms Reduction Talks policy being conducted by the START Interagency Group. A significant portion of the study has been completed and the US has proposed to open negotiations as soon as possible in 1982.

Intermediate-Range Nuclear Forces Negotiations

As part of NATO's 12 December 1979 Long-Range Theater Nuclear Forces Decision, the participating Ministers agreed to pursue a dual-track (force modernization coupled with arms control negotiations) to redress an imbalance that has continued to grow because

of increased Soviet deployment of intermediate-range nuclear missiles, particularly the SS-20. NATO modernization will consist of deployment in Europe of 108 PERSHING II missile launchers and 464 ground launched cruise missiles. Intermediate-Range Nuclear Forces arms control negotiations began between the US and the Soviet Union on 30 November 1981. In the context of these negotiations the United States has proposed to cancel plans to deploy PERSHING II and GLCM in exchange for dismantling and destruction of all Soviet SS-20, SS-4, and SS-5 missiles. The United States should continue to support full implementation of the dual-track NATO approach while recognizing that, in the absence of a meaningful arms control agreement, modernization is absolutely necessary to redress the growing imbalance.

Conference on Security and Cooperation in Europe

The second review meeting of the Conference on Security and Cooperation in Europe (CSCE) convened in Madrid in late 1980 and extended through all of 1981. The US remains aligned with NATO's commitment to preserving a viable CSCE process in support of national security objectives and in the interest of improving regional stability in Europe. Agreement with the French proposed post-Madrid Conference on Disarmament in Europe (CDE) by the 35 CSCE signatories has coalesced around three of the four criteria established by the West, i.e., that Confidence and Security Building Measures (CSBMs) be politically binding, verifiable, and militarily significant. NATO has maintained that the fourth criterion, the application of CSBMs to the whole of Europe (including the USSR to the Urals) must be accepted by the Soviets prior to Western commitment to any post-Madrid conference. It remains in the US security interest to support the French proposal for a post-Madrid CDE if it embodies all four Western criteria and is specifically mandated by the Madrid meeting as part of an overall balanced, substantive concluding document.

Mutual and Balanced Force Reductions

The Mutual and Balanced Force Reductions (MBFR) negotiations are alliance-to-alliance negotiations between NATO and Warsaw Pact. Our objective for these negotiations is to enhance stability through the reduction of military manpower in the central European reduction area to a common ceiling and the operation of Associated Measures designed to provide for the exchange of information necessary for verification of an agreement. The negotiations remain virtually stalemated. The principal negotiating issue is disagreement over manpower data for those forces present in the reductions area. The East maintains that it has fewer air ground personnel than Western estimates indicate. The

West believes that verification of any reductions and limitations is impossible without agreement on the base data.

Multilateral Negotiations

The Joint Chiefs of Staff participate in numerous multilateral fora, including the Third United Nations (UN) Conference on the Law of the Sea (LOS) and UN and UN-related arms control and disarmament bodies. Throughout the Law of the Sea negotiations, the Department of Defense has stated its vital interest in preserving US navigational and overflight freedoms, including the right of unimpeded transit on, over, and under international straits overlapped by territorial seas and archipelagic waters.

The 40-nation Committee on Disarmament (CD) evolved from the smaller Conference of the Committee on Disarmament in 1978. Although its major focus has been on superpower competition and nuclear disarmament, the CD has involved itself with all aspects of arms control and disarmament, to include general and complete disarmament, nuclear nonuse assurances, radiological weapons, new weapons of mass destruction, nonuse of force, chemical weapons, and nuclear testing limitations such as the Comprehensive Test Ban (CTB). While the CTB negotiations between the UK, US, and USSR have been suspended pending US review, interest remains high among CD members for initiation of multilateral negotiations on a CTB.

MULTINATIONAL FORCE AND OBSERVERS

The 1979 Egyptian-Israeli Peace Treaty (Camp David Accords) envisioned that the UN would extend the mandate for peacekeeping forces then in the Sinai to oversee the treaty's security provisions. Because of Soviet pressures the UN did not vote on the issue and the mandate of the peacekeeping force lapsed. In light of the inability of the UN to provide for the Sinai mission, a Protocol was added to the treaty which established the Multinational Force and Observers. This Protocol was signed by Egypt and Israel on 3 August 1981. When Israel returns the final portion of the Sinai to Egyptian control by 25 April 1982, the MFO will become operational. The MFO's mission will be to supervise implementation of the treaty annex on security arrangements and employ its best efforts to prevent violation of the terms.

The MFO is an international organization headed by

an American Director-General, who, with the approval of Egypt and Israel, appoints the military commander. The military commander is charged with the establishment of a headquarters in the Sinai and the exercise of operational control of the force and observers there. The United States will soon commit active military units to the MFO. Although all Services may be involved, it is anticipated that the Army will provide the majority of units and personnel involved with the MFO. Participation in the Sinai mission marks the first use of US military units as part of an international peacekeeping force.

To insure the broadest international participation, Egypt and Israel requested that the US recruit other participants for the MFO. Once a country agrees to participate (after being approved by Egypt and Israel), it becomes the responsibility of the MFO to negotiate the terms and conditions of participation.

The MFO will be a 2,500-man force composed of three infantry battalions; logistical support, aviation, coastal patrol, and communications elements; and a group of civilian observers. Upon final agreement by Egypt and Israel, the composition of the MFO will be:

- United States: Infantry battalion
Logistics support element
Civilian observers
- Fiji: Infantry battalion
- Colombia: Infantry battalion
- Uruguay: Transportation element

Other nations agreeing to participate in the MFO are Australia, France, Italy, New Zealand, The Netherlands, and the United Kingdom. Their contributions, currently being negotiated, are intended to round out the MFO with aviation, coastal patrol, communications, and headquarters elements.

The Protocol to the Egyptian/Israeli Treaty divided the Sinai into four zones (Map III-3). Egyptian forces and installations will be located in Zones A and B, while Israeli forces and installations will be located in Zone D. The MFO will establish checkpoints and observation posts throughout Zone C, conduct reconnaissance patrols in Zone C, insure freedom of navigation through the Strait of Tiran, and provide verification of authorized forces and installations in all zones. There is no termination date for the MFO as of this juncture.

INTERNATIONAL BOUNDARY AND THE LINES AND ZONES IN THE SINAI PENINSULA (EFFECTIVE 26 MARCH 1982)



MAP III - 3

APPENDIX A: UNITED STATES AND PRINCIPAL ALLIED FORCES

INTRODUCTION

US strategic and general purpose forces provide diverse deterrent and warfighting capabilities for defense and furtherance of national interests. US strategic offensive forces consist of land-based ballistic missiles and bombers located principally in the United States and ballistic missile submarines at sea. A modest strategic defensive capability focuses primarily on warning to insure survival and responsiveness of strategic offensive forces and the NCA. General purpose forces, which possess both conventional and theater nuclear capabilities, are deployed overseas and in CONUS. Conventional forces are suited for employment in both limited contingencies and general war, and provide peacetime presence as well. Theater nuclear forces link conventional and strategic forces for deterrence across the spectrum of conflict.

While improving force readiness and sustainability, US forces must be equipped and modernized to keep pace with the threat and support national strategy. In FY 1983 and the following budget years, the security of the nation will require that balances be struck among strategic and general purpose force capabilities as well as modernization, force readiness, and force sustainability. Near- and mid-term threats demand US readiness and sustainability, while evolving technology and Soviet progress call for continued modernization to meet the foreseeable threat for the balance of this century.

STRATEGIC NUCLEAR FORCES

US strategic nuclear forces are organized into a balanced TRIAD of complementary and independent systems. The TRIAD currently consists of 1,062 land-based ballistic missiles, 376 manned bombers carrying both air-to-surface missiles and gravity bombs, and 520 sea-based missiles in 32 submarines. These systems are complementary in that each element enhances the survivability and probability of success of the others and increases the capability for tailored retaliation. The independence of the elements helps hedge against emergence of a threat which could temporarily compromise a single element of the TRIAD.

Intercontinental Ballistic Missiles

ICBMs possess unique accuracy and responsiveness. They are highly reliable, readily retargeted, and virtually assured of penetration. For these reasons, ICBMs are suited for attack options which require time-urgent response, limited collateral damage, and high probability of success. As is the case with other legs of the

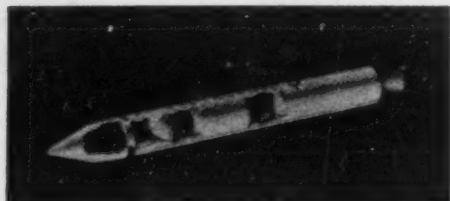
TRIAD, the ICBM component is capable of flexible employment. The US possesses 52 on-line TITAN, 450 MINUTEMAN II, and 550 MINUTEMAN III missiles (each of which carries three reentry vehicles in the only US land-based MIRVed system). Some MINUTEMAN II missiles are allocated to the Emergency Rocket Communications System for SIOP communications. In FY 1983 50 MINUTEMAN II missiles will be converted to MINUTEMAN III.

Over the years, ICBM upgrade modifications have resulted in alert rates well above 90 percent, redundant and secure communications, and comparatively low operations and maintenance costs. Three new or improved C³ systems will be incorporated into MINUTEMAN launch control centers to improve existing communication links with higher command authorities: the Air Force Satellite Communications System (AFSATCOM), 616A Survivable Low Frequency Communication System, and Strategic Air Command Digital Network. These systems will reduce the transmission, receipt, and processing time for emergency action messages as well as the crew workload during time-urgent situations. Installation of the major part of the AFSATCOM and the 616A systems is scheduled for FY 1982, with installation and integration of the three systems into all MINUTEMAN launch control centers. In addition, the improved MX-12A RV, being installed on 300 MINUTEMAN III missiles, provides increased yield and fuzing options for greater hard-target kill capability.

The increasing vulnerability of the ICBM force to a Soviet first strike is the most serious problem facing US strategic nuclear forces. The recent decision to deploy the highly accurate ten-RV MX missile is an important step. While MX demonstrates US commitment to a long-term deterrent, aggressive research and development on more survivable basing modes must be sustained. The alternatives to be examined prior to reaching a long-term basing decision in 1983 include Deep Basing, Continuous Patrol Aircraft, and defense of MX with a BMD system. The Army and Air Force will work together on an integrated plan for the development of BMD as a long-term option for defense of ICBMs. Design and development work will focus on BMD approaches that are compatible with MX basing in silos as well as defended deceptive basing of MX.

Survivably based, MX will increase strategic stability by denying the Soviets the confidence to attempt a first-strike preemption of the ICBM leg of the TRIAD. The first of 100 programmed MX missiles will be operational

In 1986, The MX, which is planned to achieve full operational capability by the early 1990s, will help to redress US disadvantages in RVs, hard-target kill capability, and capability against time-urgent hard targets. A parallel



MX

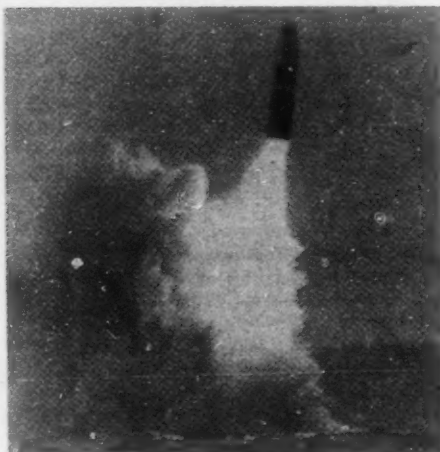
program to phase out the 52 TITAN II missiles will be partially offset by the deployment of an additional 50 MINUTEMAN III missiles in MINUTEMAN II silos beginning in FY 1983. Forty MINUTEMAN III missiles replaced by initial deployments of MX will also be emplaced in MINUTEMAN II silos. Even with the TITAN II retirement, the deployment of MX and additional MINUTEMAN III missiles will arrest the downward trend in relative capability. These ICBM deployments cannot reverse the trend, however; other improvements are necessary.

Sea-Based Missiles

The SLBM leg of the TRIAD is highly survivable and secure at sea and able to endure unsupported for extended periods. These qualities provide a high degree of deterrent stability, since for the foreseeable future the Soviet Union will be unable to neutralize US SLBMs in a first strike attack.

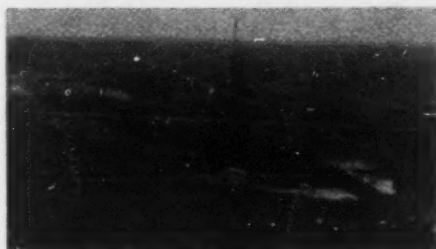
Forty-one nuclear powered ballistic missile submarines (SSBNs) were originally deployed with the POLARIS missile. In the 1970s, 31 of these ships were converted to carry the more capable POSEIDON missile. Of the remaining 10 POLARIS submarines, two have been deactivated and eight are in the process of conversion to attack submarines. The Navy's 31 active POSEIDON SSBNs are armed with the POSEIDON C-3 missile (19 ships) and the longer range TRIDENT I (C-4) missile (12 ships by early FY 1983). Each POSEIDON submarine has 16 SLBM launching tubes. The extended range of the TRIDENT I SLBM provides for larger submarine operating areas and shorter transit times from port to patrol areas. The TRIDENT I creates a greater ASW problem for the Soviets, allows faster positioning for a fully generated SSBN force, and provides the capability to attack the Soviet Union from all points of

the compass rather than on the fairly limited and predictable axes of attack from ICBM bases.



TRIDENT MISSILE

In 1982, OHIO, first submarine of the TRIDENT-class, will make its initial patrol and its sister ship, MICHIGAN, will begin sea trials. The TRIDENT submarine is designed for higher speeds and lower noise levels than its POLARIS and POSEIDON predecessors. Each TRIDENT submarine will have 24 SLBM tubes, initially



USS OHIO

armed with the TRIDENT I (C-4) missile. The TRIDENT SSBNs' shorter refit periods and lower overhaul requirements will increase patrol time of the SLBM element of the TRIAD. Ten TRIDENT SSBNs have been requested and nine fully funded through the FY 1982 Budget. The balance of funding for the tenth ship and funding for an eleventh have been requested in the FY 1983 Budget. The current strategic program would fund

15 TRIDENT SSBNs through FY 1987 at the rate of one per year. Multiyear procurement should result in a predictable, stable, and economical program.

The attributes of motion and submerged concealment, which account for SSBN survivability and endurance, have also limited the SLBM leg of the TRIAD. Motion and navigation of the SSBN have limited SLBM accuracy in the past, and submerged operations add uncertainty to NCA-to-fleet communications. Both limitations are addressed in the current strategic program.

A more accurate follow-on to the TRIDENT I (C-4) missile is in advanced development. The TRIDENT II (D-5) missile can provide accuracy sufficient to achieve hard-target kill and increase the effectiveness of SLBMs against the full spectrum of targets. The D-5 will be operational in 1989. To increase confidence in communications connectivity to the submarine force across the conflict spectrum, additional satellites will be procured for the fleet satellite communications program. These satellites will be hardened against electromagnetic pulse nuclear effects. EC-130 Take Charge and Move Out communications relay aircraft also will be EMP-hardened, and two more will be procured in 1982. In addition, a two-site extremely low frequency transmission capability will be installed in the north central United States by 1985. Accuracy of the TRIDENT II missile and enhanced communications to the SSBN force will ameliorate the most significant limitations of the sea-based leg of the TRIAD.

In addition, a nuclear sea launched cruise missile capability is to be deployed aboard submarines and selected surface ships beginning in FY 1984. The TOMAHAWK Land Attack Missile-Nuclear will achieve initial operational capability in that year. Some 400 are planned for deployment through the 1980s. Funds have been requested to back-fit LOS ANGELES-class SSN-688 and STURGEON-class SSN-637 attack submarines to fire SLCMs, initially through torpedo tubes and, in the 688-class, through an added vertical launch system as well.

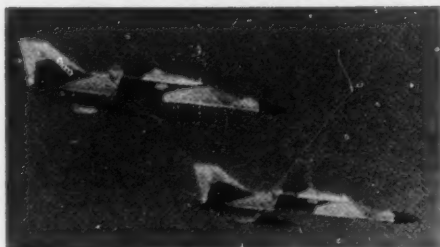
Strategic Bombers

While ICBMs provide time-urgent kill capability against even the hardest targets and SSBNs at sea feature great survivability, the manned bomber brings to the TRIAD flexibility beyond that of land-based and sea-based ballistic missiles. In addition, the bomber force shares certain advantages with missiles; it can challenge the hardest of targets and is highly survivable once airborne and outside terminal enemy defenses.

Part of the bomber's flexibility stems from the fact that crews can make directed target changes, choose

new flight routes, and accept responsibilities beyond the program capacity of missile computers. Alert bombers can be launched for survival, then executed, recalled, diverted, or dispersed as the situation unfolds and the NCA directs. Bombers provide the only strategic force capability to attack mobile, imprecisely located or otherwise transient targets. In some scenarios, bombers supported by in-flight refueling provide the only method of conducting heavy conventional bombardment in remote areas of the world within a day's time.

The current bomber force consists of 376 primary aircraft — 316 B-52s and 60 FB-111s. This force is supported by 36 training, backup, and test aircraft. Approximately 30 percent of the primary force is maintained on 15-minute alert, prepared to launch upon warning for force survival. B-52s and FB-111s both rely primarily on low altitude operations to penetrate enemy defenses. In a coordinated attack, defense suppression by ICBMs and SLBMs would aid bomber penetration.



FB-111



B-52 LAUNCHING ALCM

Historically, US strategic bombers have relied on a mix of highly accurate gravity bombs and somewhat less accurate short-range attack missiles to attack their targets. Beginning in September 1981, air-launched cruise missiles were delivered to Griffiss AFB, New York, to provide a B-52 capability. IOC will be achieved in FY 1983 when a full B-52 squadron is equipped with ALCM.

The extremely accurate ALCMs are able to destroy the hardest Soviet targets. The ALCM's 2,500km range enhances targeting and routing flexibility and can reduce bomber exposure to current and projected Soviet air defense systems. Approximately 3,000 ALCMs will be deployed by 1990. This force will increase the mass of an attack and severely stress the Soviet defensive system by forcing difficult low altitude intercepts and saturating it with large numbers of penetrators.

In the future, most Soviet interceptors are projected to have a look-down/shoot-down engagement capability. The B-52 presents a large target (compared to B-1B and ALCM), is more than 20 years old, and will have increasing difficulty in penetrating improving enemy defenses. In the near term, advanced offensive and defensive avionics are being installed in B-52 and FB-111 aircraft to counter enemy air defenses. In the mid- and far-terms, however, new penetrating bombers will be required to maintain the effectiveness of the bomber leg of the TRIAD.

To help redress the strategic imbalance and continue the capability for worldwide, rapid nonnuclear response, the US will deploy the first of 100 B-1B long-range combat aircraft by 1985, with IOC being attained in 1986. Primarily a penetrating bomber, the B-1B will have ALCM capability at IOC, less than one-one hundredth the radar reflectivity of the B-52 (less than that of the 1977 B-1A), and a more potent avionics and ECM capability. The B-1B will have lower maximum speeds than the B-1A due to redesign of the engine intakes and the swing wing. The B-1B (and B-52 also) will be hardened against EMP effects. In FY 1982, two FB-111 aircraft will be removed from the active inventory and all five squadrons of B-52Ds will be retired by the end of FY 1986. The near-term decrease in B-52s will be offset through deployment of ALCMs by FY 1985. Heavy conventional bombardment capability will be maintained by modifying B-52Gs to carry conventional weapons.



B-1

An aggressive research and development effort is in progress to reduce the risks associated with "stealth" technology in an Advanced Technology Bomber (ATB).

An early 1990s IOC is projected. With ATB deployed in significant numbers, the B-1B will be used more in a stand-off ALCM role as a replacement for the B-52. A sustained commitment to the bomber segment of the strategic program will insure the flexibility and effectiveness of the manned bomber into the next century.

AERIAL REFUELING FORCES

The current force of 615 KC-135 aerial refueling tankers extends the range of US strategic bombers. SIOP support remains the primary tanker mission, and the force, which includes 128 aircraft operated by the Air National Guard and Air Force Reserve, is committed to that effort. With tanker support, US strategic bombers can respond rapidly to remote areas of conflict without reliance upon enroute ground refueling. These bombers can penetrate to their targets at low altitude for higher survivability, execute their missions, and, if required, exit at low altitude. Bombers can then recover at support bases and be retasked or held in reserve.



ANG KC-135 REFUELING F-4

Aerial refueling also supports general purpose operations, and can spell the difference between success and failure. US airlift support to Israel in the 1973 Mideast War, when many enroute bases and overflight rights were denied, vividly demonstrated the importance of having this capability. As a result, all US strategic airlift aircraft, virtually all fighter aircraft, and many reconnaissance and C³ aircraft are in-flight refuelable and rely on tankers. Some KC-135s must be temporarily withdrawn from SIOP missions for support of other contingency operations.

In recognition of tanker requirements, two program enhancements are being pursued. First, 16 new KC-10 tankers will be delivered through 1983 and 40 more are programmed through 1986. These aircraft are tailored primarily for general purpose airlift and fighter deployment operations. The KC-10's increased cargo carrying capability will enhance the effectiveness of the airlift force. The KC-10 has a greater range and fuel off-load capability than the KC-135A, and thus enhances

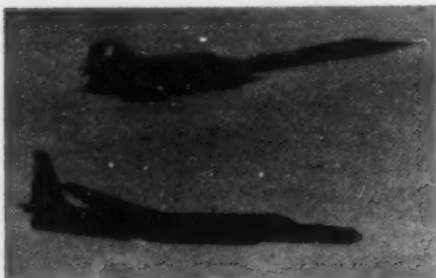
deployment of force packages to potential trouble spots. Second, a reengining program has been initiated for KC-135s. Modern engines, proven in commercial airlines, will increase the utility and survivability of the tanker force by permitting it to operate from shorter runways (approximately four times as many worldwide as at present), generate less noise and pollution, and increase overall tanker capability by 50 percent. Beginning in 1982, modification kits will be procured for 300 KC-135s over the next six years. This cost effective enhancement of equipment already in the Air Force inventory will extend KC-135 service life into the next century.'



KC-10 REFUELING B-52

RECONNAISSANCE FORCES

The US reconnaissance program consists of a unique blend of resources provided by each of the Services. These resources work in concert to provide strategic and tactical indications and warning data; assess foreign capabilities and intentions; develop and maintain data bases for planning; and support military operations in peacetime, crisis, and war. This complementary system provides the wide range of capabilities necessary to meet peacetime and wartime collection requirements. Reconnaissance resources consist of strategic and tactical standoff/penetration systems and other technical means. Strategic air-breathing reconnaissance systems include U-2R, SR-71, and RC-135 aircraft,



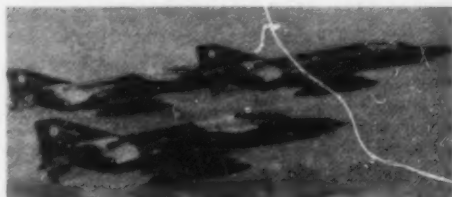
SR-71 AND TR-1

which carry a variety of sensors. These systems support reconnaissance requirements for national, strategic, and tactical users in peace and war.

(C) Tactical aircraft standoff systems include Air Force and Marine Corps RF-4Cs; Army OV-1 and RV-1D MOHAWKS; Air Force C-130s, C-141s, and RC-135s; Navy EP-3s and EA-3Bs; and Army RU-21Hs. The primary existing ocean surveillance system is the P-3 aircraft. These aircraft respond to requirements for surveillance of foreign merchant vessels and surface/sub-surface combat units in all ocean areas of the world.

Planned improvements for airborne reconnaissance systems include additional TR-1, U-2R, and SR-71 aircraft; RF-4C SLAR enhancements; and RF-4C TERECS improvements. TR-1 aircraft will carry either the Advanced Synthetic Aperture Radar System and SIGINT sensors or the Precision Location Strike System which, although a strike system, is inherently capable of ELINT data collection. These sensors will be connected by data link to ground elements for near-real-time exploitation.

The six active and eight Air National Guard squadrons of RF-4Cs equipped with photo and infrared systems represent the majority of the penetrating assets currently available to support theater commanders directly. Three Air National Guard squadrons are designated as Rapid Reactor units and are equipped with infrared systems. The Marine Corps has a single squadron of RF-4Bs, and the Navy is procuring 48 photo and infrared pods for use on the F-14 fighter.



AIR NATIONAL GUARD RF-4Cs

STRATEGIC DEFENSIVE SYSTEMS

Strategic defense entails both active and passive measures for defending the United States against air, ballistic missile, and space attack, and to protect US interests against hostile events in space. Active defense connotes the use of forces to engage and neutralize enemy air and space systems. Passive defense consists of the capability to warn of and otherwise mitigate the effects of attack; it includes such measures as warning and attack assessment, hardening and sheltering, and

other techniques to enhance the survivability of US forces, C³, and population. The United States and Canada share responsibilities for aerospace defense of the North American continent under terms of the North American Aerospace Defense Treaty.

Tactical Warning and Attack Assessment

The United States maintains only a modest active defense capability, directed exclusively against air-breathing threats. Current US strategic defensive capabilities focus primarily on tactical warning that an attack has been initiated and on assessing or characterizing the magnitude, objectives, and timing of the attack. The prime objectives are to insure the survival of the NCA and forces, and provide the NCA with information necessary for selection and execution of an appropriate response.

To decrease the likelihood of sensor-generated false alarms and subsequent overreaction, ballistic missile warning requires the sensing of missile attack by two distinct technologies. Space-based infrared sensors aboard three satellites detect the launch of attacking missiles. The system covers SLBM and ICBM launch areas. Survivability is being enhanced through EMP hardening of satellites and deployment of mobile ground processing terminals. In addition, a successor is being developed for replacement of expended satellites. Radar is the second phenomenon for sensing ballistic missiles enroute. Ground-based radars provide confirming information, limited raid counts for attack sizing, and impact area prediction for attack assessment. Current radars include three Ballistic Missile Early Warning System (BMEWS) sites in Greenland, Alaska, and the United Kingdom; the Perimeter Acquisition Radar Attack Characterization System radar in North Dakota; Precision Acquisition of Vehicle Entry and Phase Array Warning System (PAVE PAWS) radars in Massachusetts and California; FPS-85 spacetrack radar in Florida; and one FSS-7 gap-filler in Florida. BMEWS radars are primarily focused on the ICBM threat, while the other systems are deployed primarily to detect SLBM launches. Two additional PAVE PAWS radars are included in the current program to cover southeast and southwest of CONUS.

Today the US has less tactical warning and attack assessment capability against an airbreathing threat than against ballistic missile or space attack. Since the emergence of a large ballistic missile threat in the mid-1960s, US efforts against the bomber threat have been relatively modest. US atmospheric surveillance systems have been configured primarily to control access to North America. Growing Soviet bomber and air-to-surface missile capabilities, however, require a reexamination of this approach. The Soviets are continuing to

deploy the intercontinental-range BACKFIRE bomber, have a new bomber under development, and are projected to deploy long-range cruise missiles. The Soviet SLCM also requires close monitoring, although it has a short range and is currently targeted primarily against surface ships.

The limitations of current US atmospheric warning systems provide exploitable opportunities for Soviet air attack. The Distant Early Warning line, located astride the most direct polar approach to CONUS, provides warning of aircraft attack at high or medium altitudes. These 31 radars, however, have gaps in low altitude coverage, are based on obsolete 1960s technology, and are increasingly difficult and costly to maintain. An upgraded DEW line of state-of-the-art microwave radars is proposed to rectify these deficiencies, with phased development beginning in 1983.

Looking primarily south and seaward, the Joint Surveillance System supports peacetime surveillance and control of CONUS airspace. Composed of 46 Federal Aviation Administration and military radars jointly used for economy, the system is limited to line-of-sight coverage, has large gaps at low and medium altitudes, and is unprotected against electronic countermeasures. These radars will feed information to seven new Region Operations Control Centers (ROCCs): four in CONUS, one in Alaska, and two in Canada. The ROCCs; however, provide only a peacetime airspace control capability and a means of training interceptor aircrews. They would not be survivable in nuclear conflict.

During crisis or wartime, command and control of air defense will be exercised by E-3A Airborne Warning and Control System aircraft. Thirty-four AWACS aircraft have been programmed and 32 aircraft have been funded through FY 1982 for general purpose support worldwide and CONUS air defense. To further improve CONUS defense, additional AWACS have been requested in the FY 1983 Budget. While AWACS aircraft can provide low altitude coverage, they are too few and too costly to operate as a full time tactical warning fence during peacetime. Also, overseas deployments reduce peacetime availability of AWACS for CONUS air defense. Improved alert postures, more effective operational basing, and random patrols are being evaluated as means to improve the CONUS defense capability of AWACS forces. The E-3A AWACS can provide survivable command and control for air defense forces during periods of increased alert.

The strategic defense program also includes procurement of over-the-horizon backscatter (OTH-B) radars, which would be able to look as far as 1,800 miles east, west, and south of CONUS. These OTH-B and other air

defense initiatives are designed to improve bomber and cruise missile warning capabilities while reducing annual operating costs.

Air Defense

In 1981, the NORAD Treaty was renewed for five years. The current Canada-US policy on North American air defense affirms the need for a system to provide tactical warning and attack characterization, limit damage to strategic retaliatory forces and C³ systems, and control access to continental airspace. An improved capability for active air defense is an essential component of such a system. Once surveillance systems indicate a potential threat, air defense aircraft must be launched to intercept, identify, and characterize the attack and, if directed, engage it.

Aircraft currently assigned to strategic defense include 153 F-106s, 90 F-4s, 36 F-101s, and 18 F-15s operated by Active Air Force and Air National Guard units. The F-101s operated by the Air National Guard will be replaced with F-4s in FY 1982. Most of the remaining aircraft are more than 20 years old and have range, fire control, communications, and armament limitations which reduce their effectiveness against a low altitude air attack. Interceptors assigned to strategic defense are augmented in crisis or war by other Air Force, Navy, and Marine Corps aircraft not committed elsewhere. F-15 aircraft will be assigned to a dual air defense/antisatellite role as an initial step toward interceptor force modernization. Additional squadrons of air defense F-15s will be assigned to improve US capabilities to deter atmospheric attack; active force F-106s will then be retired. New air defense and AWACS aircraft in adequate numbers would prevent delivery of a large portion of Soviet long-range bomber and cruise missile megatonnage.

Space Surveillance and Defense

Space surveillance is maintained by a system of 29 dedicated, contributing, and collateral sensors. Space-track surveillance is directed toward space object identification and satellite attack warning and verification; in the future, it could assist in antisatellite targeting. A catalogue of the more than 4,000 man-made objects now in space is constantly updated in order to track the many satellites crucial to US warning and communications; those performing the same functions for the Soviet Union; and new objects in space, some of which could be elements of the Soviet ASAT capability.

Today the United States possesses no operational ASAT and trails the Soviet Union in development of a low altitude space interceptor. The US, however, is continuing to pursue an ASAT development program vigor-

ously. The program consists of miniature vehicles, launched from an F-15 interceptor and propelled by a two-stage Short-Range Attack Missile (SRAM). An operational system using F-15s is programmed for the mid-to-late 1980s. A US ASAT system will confront the Soviets with both a deterrent force and a counter-threat retaliatory system against their satellites.

While the Soviets have not yet demonstrated a high altitude ASAT capability, such a capability is forecast. US high altitude satellites currently face other threats, such as counter C³, ECM, and high altitude EMP.

Ballistic Missile Defense

The US has had no deployed BMD system since the one SAFEGUARD site, permitted by the ABM Treaty, was closed in 1976. However, a vigorous BMD R&D program has been maintained. The selection of BMD as one of the three options to be considered in future ICBM deployment decisions has created increased interest in BMD capabilities. The BMD program acts as a hedge against Soviet treaty abrogation and unconstrained offensive threat growth.

The BMD program has emphasized the development of two concepts, Low Altitude Defense (LoAD) and overlay defense, plus advancement of the BMD technology base to support future system concepts. Both the LoAD and overlay defense have potential for improving US ICBM survivability and countering the Soviet threat.

The current strategic program directs the Army to provide a BMD option for defense of ICBMs to support a long-term MX deployment decision. The current LoAD preprototype development program is being accelerated within the constraints of the ABM Treaty.

Civil Defense

Civil defense can play an important role in national security by enhancing the survivability of the American population and leadership in the event of attack and providing a basis for eventual national recovery. Civil defense is also an important factor affecting international perceptions of the US-Soviet strategic balance. Civil defense should provide for enhanced protection of population and essential industry.

The US civil defense program currently provides planning for protection of the civilian population in the event of a nuclear attack, to include warning, evacuation, sheltering, information, and radiological defense. The current program is modestly funded and designed to permit a measured acceleration of civil defense preparedness under crisis conditions. Near-term measures

include population relocation planning and development of a nationwide infrastructure capable of executing these plans.

The Federal Emergency Management Agency is responsible for the US civil defense program. The Department of Defense exercises oversight of policies and programs to assist in achievement of national civil defense objectives. The integration of military and civil efforts is an essential feature of the civil defense program, and FEMA, along with other Federal agencies, participates in JCS exercises to test coordination plans.

THEATER NUCLEAR FORCES

US theater nuclear forces make a significant contribution to deterrence on a worldwide basis, but play a particularly important role in Europe. NATO's deterrent strategy and warfighting capabilities hinge on the effectiveness of the NATO triad of conventional, theater nuclear, and strategic nuclear forces. Under this concept, theater nuclear forces provide direct defensive capability to supplement the contribution of conventional forces, permit deliberate escalation if needed to raise the costs and risks of aggression, and provide a credible link to the deterrent capability provided by strategic nuclear forces.

The United States and the Soviet Union, together with their NATO and Warsaw Pact allies, deploy land-based and maritime theater nuclear systems with a wide range of capabilities. Although US and NATO deployments have remained fairly stable over time — and in some instances have actually declined — the Soviet Union has continued to expand and modernize its TNF at a rapid pace. Soviet efforts have already turned the TNF balance in Europe to the Warsaw Pact's favor.

US forces are equipped with a mix of nuclear delivery systems, many of which are also capable of delivering conventional munitions. For battlefield targets, artillery-fired atomic projectiles (AFAPs) are available for 8-inch and 155mm howitzers. Targets beyond the immediate battle area can be struck with the LANCE missile and dual-capable aircraft such as the F-16, F-4, A-4, A-6, and A-7. Systems suitable for still more distant targets are the PERSHING IA missile and land-based F-111. The majority of these forces are committed to NATO. Nuclear defense systems, deployed primarily in support of NATO, include atomic demolition munitions and nuclear NIKE HERCULES.

The majority of the non-US medium-range TNF capability in NATO is provided by over 400 allied dual-capable tactical fighters and medium bombers, including coproduced F-104 and F-16 aircraft and European-built delivery systems such as the British VULCAN

bomber and JAGUAR fighter bomber and the multinational TORNADO fighter bomber.

NATO countries also provide other TNF capabilities, including nuclear-capable howitzers and short- and medium-range missiles. The Federal Republic of Germany (FRG) deploys the PERSHING IA missile, and the FRG and other NATO nations possess LANCE and the older HONEST JOHN. S-3 IRBMs and mobile PLUTON launchers give France a ballistic missile capability.

In addition, US and Allied theater nuclear systems deployed in Europe are supplemented by strategic forces. For example, US POSEIDON RVs are committed to the Supreme Allied Commander, Europe, for the NATO theater. The United Kingdom and France also maintain SLBM forces, but only the British missiles are committed to NATO. The UK force consists of 4 submarines, each carrying 16 POLARIS missiles. Beginning in the 1990s, the UK plans to deploy the TRIDENT submarine (constructed in the UK) and its SLBM system as a replacement for POLARIS. The French possess 5 SSBNs, each with 16 missiles; they will add a sixth submarine in 1985.

Although most US TNF are allocated to NATO, major capabilities are deployed outside that theater, primarily in a maritime role. Dual-capable systems on ships and naval aircraft provide nuclear capabilities for antiair, antisubmarine, and antisurface operations as well as strikes against land targets.

The US TNF capability in the Pacific has steadily eroded over the past 15 years despite a Soviet buildup. Increased Soviet deployments of nuclear-capable land, air, and naval forces pose a significant threat to US interests in the Pacific and Indian Ocean areas.

TERRIER SAM provides shipboard capability to conduct close-in nuclear antiair operations. TERRIER, however, has only limited effectiveness against Soviet BACKFIRE aircraft equipped with AS-4 antiship cruise missiles. The SM-2 nuclear missile is scheduled to begin replacing TERRIER in 1986. The SM-2 will provide an enhanced capability against the entire spectrum of air threats and have improved safety and command and control features.

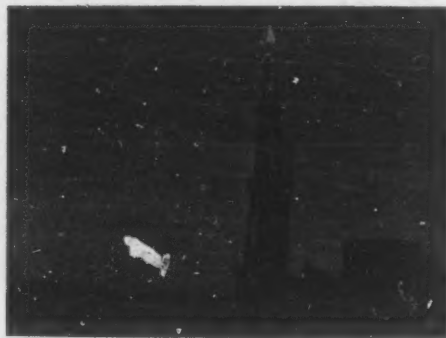
Weapons for nuclear ASW include rockets deployed on surface ships (ASROC), submarine-launched rockets (SUBROC) deployed on submarines, and B-57 nuclear depth bombs delivered by US S-3, P-3, and SH-3 aircraft and some allied helicopters and maritime patrol aircraft. SUBROC is technologically obsolete and programmed for phaseout. An ASW standoff weapon, designed for surface ship or submarine launch, is in the research and development phase.

A-4, A-6, and A-7 aircraft equipped with tactical bombs provide a nuclear capability against ships and, at present, the only naval theater nuclear capability to strike critical targets ashore. A-6 aircraft have an all-weather capability, and both A-6s and A-7s can operate at combat radii in excess of 1,000km with carrier-based tanker support. The effectiveness of both aircraft in carrying out their nuclear roles is high, but will decline as Soviet air defenses shipboard and ashore continue to improve. Introduction of the new dual-capable FA-18 as a replacement for the A-7 will modernize carrier-based capabilities for nuclear and conventional missions.

TNF Modernization

The continued modernization and strengthening of all Soviet theater nuclear and conventional forces require the modernization of NATO and worldwide US TNF. Soviet deployment of the SS-20 mobile missile in Europe has been particularly troubling to NATO and has caused the Alliance to focus on modernizing its own long-range theater nuclear capability (LRTNF) (longer-range INF). NATO modernization is not designed to match the Warsaw Pact system by system, but to provide a significant long-range capability that expands the possible responses to aggression.

In December 1979, NATO responded to the Soviet LRTNF buildup in Europe by endorsing the deployment of 108 US PERSHING II ballistic missile launchers to the Federal Republic of Germany and 464 US ground-launched cruise missiles to five European countries. This decision was reconfirmed by the Alliance in October 1981. The PERSHING II missile, which is scheduled to be deployed in FY 1984, will have improved accuracy as a result of using a maneuvering RV equipped with terminal guidance radar. GLCM will have an operational range of about 2,500km and accuracy sufficient to destroy the hardest enemy targets. GLCMs are suitable



PERSHING II

for attacking some fixed targets now covered by dual-capable aircraft, and thus may enable SACEUR to shift additional aircraft to conventional roles. The introduction of GLCM also will allow the use of more aircraft for nuclear strikes against mobile targets not suited to missile targeting. The IOC for the first GLCM flights in Europe is scheduled for early FY 1984 in the UK.



GLCM

The combined force of modern dual-capable aircraft, GLCM, and PERSHING II will help to meet NATO's near-term need for LRTNF. Supported by adequate C³, this combination will enhance force survivability, penetration, and tactical flexibility, and provide NATO attack options to meet aggression on whatever level is necessary, including attack on forces based in the western USSR. The US is improving TNF C³ networks with an improved high frequency radio system and ultra high frequency (UHF) satellite ground terminals to insure responsiveness to US national and NATO requirements.

The Army is developing two new AFAPs, which have also been adopted by the Marine Corps. The new 8-inch AFAP (W-79) is in production and will have approximately twice the range of the old round (29 vice 14km), ballistic similitude with conventional rounds, improved accuracy, decreased preparation time, and enhanced safety and security features. The W-79 is an enhanced radiation (ER) weapon with increased effectiveness, particularly when attacking armor, which will allow it to be safely used closer to friendly troops and civilian popula-

tion centers. Initial deployment of the 8-inch AFAP will be limited to US territory.

The improved 155mm AFAP (W-82) is currently in engineering development. The new round will have approximately double the range (30 vice 14km); ballistic similitude with conventional rounds; and enhanced safety, security, and command and control.

The LANCE tactical surface-to-surface missile provides an all-weather capability for attacking high-value targets beyond the range of cannon artillery. LANCE currently has a fission warhead, however, a new warhead now in production incorporates an ER option. LANCE deployment provides a significant increase in military capability, safety, and security over the HONEST JOHN and SERGEANT weapons it replaced.

Much of the US theater nuclear capability is currently provided by aircraft which can be employed in both nuclear and conventional configurations. With the exception of 252 F-111s and 256 A-6s, these aircraft lack adequate low-level navigation and weapons delivery capabilities for operations at night and in adverse weather. These capabilities will improve as TORNADO and other NATO aircraft programs are fully implemented in the 1980s, and US F-16s and F/A-18s are equipped with improved attack sensors.

The TORNADO will have the capability to be employed in the nuclear strike role and will incorporate advanced systems to provide effective all-weather, low-level penetration. The strike radius of the TORNADO approximates that of the US F-16 and will be significantly greater than that of the F-104 fighter which stands nuclear alert in central Europe today. F-104s in several NATO air forces will be replaced in the 1980s by coproduced F-16s, providing improved capabilities against a range of fixed and mobile targets. F-16s will complement the TORNADO and existing nuclear-capable aircraft.

The A-4 and A-6 aircraft have provided the Marine Corps with a nuclear-capable delivery system during the past two decades. In the late 1980s, the AV-8B is scheduled to replace the A-4. Marine Corps A-6s will continue to provide low-level, all-weather, conventional and nuclear delivery capabilities. The number of Marine dual-capable aircraft will significantly increase when the F/A-18 fighter/light attack aircraft enters the inventory in FY 1983, replacing the nonnuclear-capable Marine F-4 force.

The TOMAHAWK nuclear land attack cruise missile is launched from either submarines or surface ships. The TLAM-N will provide a worldwide maritime nuclear capability and additional nuclear options in many

regions where US forces are not now deployed.

CHEMICAL WARFARE AND NUCLEAR/BIOLOGICAL/CHEMICAL DEFENSE

US chemical warfare objectives are fourfold: to deter the use of chemical weapons against the US and its allies, and, should deterrence fail, retaliate with chemical weapons to encourage cessation of CW at the lowest possible level of intensity; to expedite modernization of the US deterrent retaliatory stockpile with binary chemical munitions, in order to establish credible and effective nonnuclear deterrence and gain leverage in the area of CW arms control; to be able to conduct sustained operations in a nuclear, biological, or chemical environment; and to support the eventual objective of concluding a verifiable arms control agreement prohibiting chemical weapons.

The US has attempted to conclude an effective chemical weapons arms control joint initiative with the Soviet Union, but little progress has been achieved. The Soviets have remained intransigent on the development of acceptable provisions for verification. The 1979 Sverdlovsk anthrax incident and recent US evidence indicating the use of mycotoxins in Southeast Asia have increased concerns over verifiability and compliance mechanisms of the Biological Weapons Convention (BWC). Continuing reports of extensive use of lethal CW/BW agents in Laos, Kampuchea, and Afghanistan are of major concern to the US and other parties to the 1925 Geneva Protocol and the BWC. The US is continuing to provide evidence to the UN and to other governments which may assist in further linking the Soviets to a breach of the BWC and Geneva Protocol.

In the absence of an effective international agreement to remove existing and future threats of CW, the US must acquire and maintain an effective CW deterrent retaliatory capability. A Soviet chemical attack would seriously degrade all aspects of US and allied combat operations. To deter such an attack, the US has moved toward CW retaliatory stockpile modernization by appropriating funds to construct and equip a binary production facility.

The binary munitions, which could be produced in the near term, are the 155mm artillery projectile and the BIGEYE spray bomb. Delivery systems, other than aircraft, which could provide US forces an added range capability are the Multiple Launch Rocket System, Corps Support Weapons System, and cruise missile. Production of binary munitions would enhance our deterrent capability.



CW DECONTAMINATION

The CW defensive posture of US forces has improved the last few years with the help of increased appropriations. The US has implemented a major procurement and R&D effort directed primarily to rapid improvement in US defensive capabilities. An extensive program for medical support is underway and efforts are continuing to improve individual/collective protection and decontamination capabilities.

Our NATO Allies are taking positive steps to improve their CW defense capabilities for tactical forces. In addition, the alliance must consider measures to defend against chemical attacks on C³ nodes, ports, airfields, and logistics facilities.

COMMAND, CONTROL, AND COMMUNICATIONS (C³)

To meet the requirements of deterrence and force employment, C³ systems capabilities must be aligned with force capabilities. This requirement implies that C³ systems must not only support an initial retaliatory response, but also survive and endure through a protracted period of conflict.

Because of the complexity in insuring that C³ systems are developed in consonance with the forces they support, special planning will need to be conducted in cross-program, cross-Service, cross-command, and international systems. The Joint Chiefs of Staff will develop guidance for those programs.

C³ systems are categorized as strategic, theater/tactical, and defense-wide. Strategic systems are designed to provide a secure and survivable means for directing strategic forces under nuclear conflict conditions. Theater/tactical communications should provide reconstitutable, secure, and interoperable systems for nonnuclear conflict. Defense-wide systems provide in-

formational, navigational, and long haul/bulk communication to all forces.

Strategic C³ Facilities

Strategic C³ systems link the NCA and CINCs to forces in the field. Warning sensors and connectivity communications provide the means for detecting and forwarding attack information to command authorities. Command centers and connecting communications systems provide the means for decisionmaking and dissemination of decisions to operational forces. Many existing C³ systems, including equipment used for warning, attack assessment, and NCA conferencing, are vulnerable to high altitude nuclear effects. To reduce communications uncertainties in trans- and post-attack periods, new systems must be incorporated into the C³ program.

Survivability of the NCA during and after a nuclear attack must be guaranteed. While the National Emergency Airborne Command Post (NEACP) is the most survivable element of the National Military Command System, it must land for servicing after 72 hours of flight. Since the NEACP has limited airborne endurance, the Mobile Command Center (MCC) should be developed to provide the connectivity endurance necessary during a protracted nuclear conflict. The MCC would have the capability to support the NCA, including direction of the strategic forces. Funding has been requested in the FY 1983 Budget to develop a prototype MCC, which will be evaluated to insure that it can provide required connectivity and battle staff support. Additionally, a new communications satellite system, MILSTAR, is being designed for service in the 1980s. Operating at extremely high frequencies, MILSTAR will have improved performance against nuclear effects, better antijam performance, and increased physical survivability features. Strategic and tactical ultrahigh frequency continuity will be upgraded with the deployment of additional fleet communications satellites in FY 1985.

Tactical and Mobile C³ Systems

US and allied tactical C³ systems must be as survivable as the forces they support and capable of assuring secure tactical connectivity during conventional, nuclear, chemical, and biological attack. These objectives can be achieved through the proper combination of hardening, redundancy, improved mobility, dispersal and chemical/biological protection. C³ systems which survive must also allow interoperability among tactical US systems, tactical US and allied systems, and US tactical and long haul/bulk communication systems. The modification of existing C³ systems to achieve interoperability is expensive, but an interoperable network



SATELLITE COMMUNICATOR

of C³ systems is essential for successful joint and combined operations. Additionally, there must be a continuing effort to upgrade and replace existing equipment with state-of-the-art, secure, jam-resistant, and low-probability-of-intercept communications systems.

A number of programs are underway to improve US tactical command and control (C³) systems. The Joint Interoperability of Tactical Command and Control System Program is developing the interface design standards for use by tactical command and control systems during joint and combined military operations. These efforts are being directed toward the development of standards compatible and interoperable with US systems, as well as those of NATO and other allied nations.

VHF/UHF tactical voice antijam communications must be upgraded to survive in a hostile electromagnetic environment and maintain joint interoperability. A program is being pursued to provide this interoperability through modification of Navy (AN/ARC-182 and AN/WSC-3) and Air Force (HAVE QUICK) radios.

The Air Force is procuring the German developed EIFEL/DISTEL system for tactical air offensive command and control. The installation of this system in US tactical operations centers in Europe will significantly improve interoperability with allied forces. Initial operation of this system began in 1981.

Single Channel Ground to Air Radio Set (SINCGARS) is an Army program to provide lighter, more reliable, secure, jam-resistant tactical radios, with a significant increase in available frequencies and new electronic counter-countermeasures (ECCM) to reduce the effects of enemy ECM. Funds have been requested in the FY 1983 Budget to support the developmental and operational testing of candidate radios. Initial production of this urgently needed radio is planned for FY 1983.

The Position Location Reporting System is a joint Army-Marine program to provide tactical commanders with a continuous picture of deployed forces on the battlefield. This is done automatically and on a near real-time basis regardless of weather, terrain, or geographical location. Initial operation is planned for the mid-1980s.

US forces need mobile/transportable communications with an automatic trunking and switching capability. Acquisition of TRI-TAC equipment and continued development of the Theater Joint Multichannel Switching System will help resolve this problem. The Joint Crisis Management Capability will provide forward deployed, mobile, crisis/contingency communications equipment for field commanders.

Initiatives are underway to improve C³ and intelligence integration. The Joint Tactical Fusion Program is an Army/Air Force effort to develop an automated system capable of correlating multi-source input from intelligence sensors to provide commanders an automated display of the battlefield. This system will allow a timely, meaningful exchange of data based on the tactical commander's priorities, and will be compatible with joint standards for interoperability.

National And Defense-Wide Support Systems

Effective Defense-Wide communications systems are essential for the command and control of strategic and tactical/theater forces, as well as their logistic, intelligence, navigation/positioning, and meteorological support.

The fixed facilities and satellite systems of the Defense Communications Systems (DCS) are vulnerable to sabotage and conventional and nuclear attack. Ongoing improvement programs will enhance the survivability of DCS systems by providing increased redundancy and mobile restoration assets.

High frequency communications are being reemphasized for both the DCS and Service long-haul communications as adaptive and antijam technology offers improvements in capability and reliability. Logistically unsupportable equipment is being replaced in parallel with development of follow-on equipment.

Upgrades to nonsatellite digital systems have begun in southern Europe and will be extended throughout the world. The worldwide conversion from analog to digital transmission will result in improved reliability, quality, and security.

Satellites provide global communications for command and control of mobile forces and reliable theater communications unconstrained by terrain features. In particular, satellites provide the NCA with the capability for direct global communications to combat forces and real-time reports from executing forces. The development and employment of Defense Satellite Communications System Phase III (DSCS III) will reduce satellite vulnerability to those threats. The DSCS III will support increased user requirements, sustain satellite services through the 1980s, and provide service under jamming conditions.

MILITARY SPACE ACTIVITIES

The US currently employs orbital systems for a wide range of military functions, including communications relay, navigation, environmental monitoring, mapping and geodesy, threat surveillance, and strategic and tactical warning. Because the use of space is critical to military operations, the US is developing a low altitude ASAT system which can be used to deter Soviet attacks on US satellites and, if necessary, deny the Soviets the wartime use of selected satellites.



ASAT

With the successful flights of the space shuttle Columbia in 1981, the US entered the era of reusable launch vehicles. The four programmed shuttle orbiters will provide an increased payload launch capability and, in the long-term, direct on-orbit access to previously deployed low altitude satellites. At present, sensor systems in low-earth orbit must be abandoned when maneuver fuel and other consumables are exhausted or the satellite malfunctions. By allowing replenishment, repair, or recovery and re-use of satellites, the shuttle will help to extend the operational life of these costly assets.

Although the shuttle is planned to replace expendable launch vehicles, program delays have required additional TITAN III booster production to meet launch re-



SPACE SHUTTLE

quirements during the transition period. In addition, DOD is reassessing the long-term requirement for expendable launch vehicles. A mixed fleet of shuttles and expendable boosters may be needed to provide an assured and responsive satellite launch capability. DOD planning includes the transition of all national security spacecraft launches to the shuttle by FY 1987.

ELECTRONIC WARFARE/C³ COUNTER-MEASURES

Joint Perspective

Electronic warfare and command, control and communications countermeasures (C³CM) are receiving increasing emphasis within the Services and the unified and specified commands. This emphasis is in recognition of time and space compression brought about by modern weaponry and electronics and the increased dependence of commanders at all echelons on electronic means for commanding and controlling their forces. The Soviets have long recognized the criticality of the command and control function and its associated communications. The Soviet emphasis on the integrated use of firepower, jamming, and deception leaves no doubt that they are earnest in their belief that by destroying an enemy's electronic emitters they will eliminate him as an effective fighting force. In contrast with the Soviets' capabilities to destroy, degrade, or deceive an enemy's C³ capability, the US approach, until recently, was essentially defensive and reactive.

In recognition of Soviet EW capabilities, the Secretary of Defense has provided detailed guidance to the Services and appropriate Defense Agencies for intelligence support to C³CM; integration of C³CM into operations plans and orders, operational tests, and exercises; and coordination of C³CM matters with allies and other friendly nations.

Benefits of this heightened emphasis are evident. EW and C³CM have begun to receive a larger share of Service funding, resulting in enhancement of systems procurement. In addition, most unified and specified com-

mands have established working groups to insure that C³CM is adequately addressed in operations plans and directives. A joint Army-Air Force C³CM concept has been developed and signed. Finally, the unified and specified commands and Rapid Deployment Joint Task Force have established C³CM operations cells and required their components to do the same.

The net result of all these actions is an aggressive EW and C³CM approach across the board — in policies, strategy, concepts, doctrine, tactics, training, and operations. EW and C³CM are included as major objectives in joint exercises such as TEAM SPIRIT, NORTH-ERN WEDDING, BOLD EAGLE, and GLOBAL SHIELD. These exercises provide opportunities to activate and exercise C³CM planning cells, resulting in enhanced training and the practical application and testing of concepts. The Joint Electronic Warfare Center, recently established under the auspices of the Joint Chiefs of Staff at Kelly Air Force Base, Texas, has begun a lessons-learned program for the exchange of EW and C³CM exercise-related information, initiated action to identify requirements for C³CM data bases, and is establishing a combat evaluation program which will aid commanders in understanding how EW affects the conduct of their operations.

The need for effective combined efforts, especially in Europe, makes it vitally important that the US and its allies practice essentially the same EW and C³CM doctrine, and that all are prepared in terms of organization, equipment, and training to conduct mutually supporting EW and C³CM operations. To this end, NATO has published a counter-C³ policy to complement existing EW policy. EW measures in the NATO Long Term Defense Program are also being refined to make them more affordable and, therefore, more likely to be accomplished. Outside NATO, similar mutual support and interoperability considerations have been added to the US/Canada Basic Security Plan.

Army

Army EW/C³CM capabilities are expanding with the formation of divisional combat electronic warfare and intelligence (CEWI) battalions and corps level CEWI groups. Ten battalions in the Active Army component were funded in the FY 1980-1981 Budgets. The FY 1982 Budget provides for four more battalions, two undersized groups, and three separate companies. In addition, sufficient manpower spaces have been authorized to bring CEWI units supporting the RDJTF up to the same strength as the combat units they support. The FY 1983 Budget provides for two Active component CEWI battalions, two more CEWI groups, an aerial exploitation battalion, and three more CEWI companies for separate

brigades and armored cavalry regiments. The FY 82 Budget also provides CEWI resources in the Reserve Component for the first time.

Navy

The Navy has made significant strides in EW and C³CM in both investment and training. The AN/SQ-32 V(1) and V(2) will be installed on most combatants and auxiliaries in the surface Navy to provide an enhanced passive EW capability. Major combatants are also being fitted with an active EW capability to counter antiship missiles. Aircraft self-protection EW and C³CM systems are standard. The EA-6B, EP-3E, and EA-3B provide dedicated airborne EW or SIGINT capabilities. In addition, passive electronic detection systems integral to the E-2C and S-3A aircraft provide the means to correlate and cross reference some threat signals. The EA-6B, which provides both active and passive capabilities in a platform capable of accompanying the strike forces, has



E-2

progressed through a series of upgrades. The next generation to be introduced into the fleet will feature a greatly enhanced capability to jam priority threats. Ongoing modernization of the EP-3 passive electronic reconnaissance aircraft will provide an improved capability to exploit the signal environment.

Air Force

In FY 1981, the Air Force developed the Electronic Combat Action Plan, focusing investment and acquisition priorities to correct electronic combat (EC) shortfalls. This 15-year investment strategy is designed to allow the transition from a defensive to an offensive EC capability. The Air Force has also developed an EC operational concept called CONSTANT LIGHT, which integrates EC assets for suppression of enemy air defenses (SEAD), EW, and C³M.

Of particular concern to the Air Force is the dense and sophisticated electronic environment expected in

central Europe, where self-protection may not be adequate to insure the survivability and effectiveness of US and allied weapon systems. To enhance systems survivability, the FY 1983 Budget continues procurement and development of complementary lethal and electronic systems to suppress enemy air defenses. For example, modifications to the WILD WEASEL F-4G have been completed on 116 Air Force F-4 aircraft. These F-4G SEAD weapon systems will be equipped with the US high-speed antiradiation missile in FY 1984. In addition, the Precision Location Strike System (PLSS) is scheduled for an IOC in the mid 1980s; PLSS is an all-weather weapons system designed to locate, identify, and guide strikes against enemy air defense emitters. COMPASS CALL (EC-130) and EF-111 airborne systems are programmed for IOC in the early 1980s. These complementary jamming systems will be capable of working with deployed Navy and Army forces to disrupt Soviet integrated air defense radar and communication networks. Expendable harassment vehicles, now planned, will have lethal and electronic capabilities against enemy radars and communication systems. The Air Force has also requested funds in the FY 1983 Budget to provide ground-mobile systems capable of attacking enemy C³ during wartime and providing training for friendly forces during peacetime.

To insure mission accomplishment when exposed to jamming, a jam-resistant UHF communications capability is funded in FY 1982 for the continued development of HAVE QUICK equipped radios, as well as the SEEK TALK program for Air Force aircraft and ground systems. Additionally, jam resistance in the VHF band is being addressed by continued development of SINGARS V for Army and Air Force ground use.

ARMY GENERAL PURPOSE FORCES

The Soviet Union has developed a quantitatively superior Army which is striving to achieve a qualitative advantage over the US and its allies. To counter this threat, US strategy requires a flexible, highly deployable, qualitatively superior Army. The most demanding challenge confronting the Army is the requirement to develop the capability to respond to multiple threats worldwide without compromising vital interests in Europe.

To meet these requirements during 1983, the Army will apply its resources to equip Active and Reserve forces more fully, modernize existing forces, and improve force sustainability and training levels. In support of these objectives, the Army is lightening the force and exploiting technology, while adding combat and support structure and increasing the role and readiness of Reserve Components. The Army's FY 1983-1987 pro-

gram will provide a force with increased strategic deployability, tactical mobility, and combat capability.

In FY 1983, Active Army forces will remain at 16 divisions; 4 of with 2 Active brigades and 1 Reserve Component (RC) roundout brigade; and 1 division with 1 Active brigade and 1 RC roundout brigade. A significant portion of the Active forces are forward deployed: 4 divisions, 2 divisional brigades (parent divisions based in the CONUS), and 2 armored cavalry regiments in Europe; a division in Korea; and theater defense brigades in Berlin, Alaska, and Panama. The 11 remaining Active divisions (10 in CONUS, 1 in Hawaii) are available for worldwide employment, with priority to NATO. Many of these CONUS-based divisions are tasked to respond to contingencies in the Pacific, Southwest Asia, or elsewhere. Most units are tasked in multiple contingency plans, some of which may be required to be executed simultaneously. Current Army force levels are inadequate to meet all requirements of our national strategy.

Also in 1983, the Army will begin its first major reorganization in nearly 20 years, a program called Army 90. The new organization, which will derive maximum benefit from the capabilities of modern equipment and doctrine, is designed to enable Army units to defeat a sophisticated enemy on the battlefield in nuclear, chemical, or conventional warfare. The Army 90 structure will contain a mix of redesigned heavy and light divisions. The reorganized heavy division, designed primarily for use on the NATO battlefield, is to be equipped with a new generation of materiel systems, all with an IOC of 1986 or sooner. It will be organized for continuous — night and day — combat operations, employing single-weapon companies smaller than the current ground force company. The new light division will be designed for rapid strategic deployment and sustained operations in distant areas with relatively austere logistic support. By exploiting new technology, the Army seeks to give the new light divisions much of the firepower and survivability of current heavy divisions. Thus, the new light division will be effective on NATO battlefields as well as in a wider range of contingencies outside of Europe.

The Army faces the recurring challenge of recruiting soldiers to man the force. During the past fiscal year, the Army was able to meet its recruiting goals and significantly increase the quality of accessions. The Army plans to exceed past performances by maintaining the same high level of quality in its FY 1983 accessions which should have a significant positive impact on personnel readiness. The decline of the 17 to 21 year old recruiting population confronts recruiters with an imposing challenge. Serious considerations, therefore,

must be given to a comprehensive package of educational and enlistment incentives to attract quality soldiers.

In response to concerns about the effects of personnel turbulence on combat readiness, the Army has developed a concept called the New Manning System. The objective of this program is to keep soldiers in their units longer so they and their leaders can train and serve together for improved combat readiness. Since a major portion of the Army is deployed overseas, the system will use unit movement (rotation and/or replacement) to meet commitments and return the unit to a stateside home base. These features of the concept (stabilization, unit movement, home basing) will operate within the framework of an American Regimental System designed to create an environment that fosters cohesion and commitment.

Another matter of concern is the shortage of war reserve stocks (WRS). While the Army has made some progress in improving the posture of war reserve stocks, shortfalls continue to exist in the pre-positioning of major items of equipment, ammunition, and secondary items.

Efforts to improve Army capabilities to reinforce Europe are receiving increased attention. Recent actions have increased the fill level of pre-positioning of materiel configured to unit sets (POMCUS) to the highest level ever. The current POMCUS program provides for the eventual storage of six division sets of equipment.

The Army's capability to fight effectively depends upon effective logistics support and strong Reserve Components. Since approximately 65 percent of the Army's combat service support (CSS) capability is in the RC, these units must be provided modern equipment and trained on it to sustain the Army's combat capability. The Army has begun upgrading RC CSS units. Under the CAPSTONE and Affiliation programs, RC units train with the major Active and Reserve units they will support upon mobilization and deployment.

The Army's program reflects the need for stronger RC forces. By 1983 additional Active divisions will have RC roundout brigades. New RC divisions will be formed from existing separate Army National Guard brigades. Active force structure expansion has been deferred in favor of greatly increased readiness of existing forces.

Army Modernization

The pace of modernization will quicken over previous years as a result of the growth in funding permitted by the FY 1981 Supplemental and FY 1982 Amended Budgets. Greater efficiency in development and produc-

tion, leading to earlier fielding of critical equipment, is the primary result of the increased funding. It is essential that adequate funding levels be continued.

Armored Vehicles

Procurement of 1,686 new M60A3 tanks was completed in FY 1981. In addition, the Army plans to convert 5,661 M60A1 tanks to the M60A3 configuration, which includes a new tank thermal sight, laser range finder, and solid state ballistic computer. These features give the M60A3 an improved day and night firing capability.

M1 main battle tanks were sent to field units in CONUS in 1981 and will be distributed to field units in Europe in 1982. When available in quantity, the M1, one of the most advanced tanks in the world, will provide US forces with improved mobility, survivability, and firepower. The Army plans to field a total of 7,058 M1s. A maximum production rate of 60 tanks per month will be achieved in 1982; by 1985 that rate will increase to 90 tanks per month. In late FY 1985, the M1 will begin to be produced with the German-designed 120mm main gun system, which will be interoperable with the German LEOPARD 2 tank gun.



M-1

The M2 and M3 BRADLEY Fighting Vehicles are being procured to modernize Army mechanized forces. Both vehicles mount automatic 25mm cannons, with 7.62mm coaxial machineguns and the tube-launched, optically-tracked, wire-guided (TOW) antitank system as secondary weapons. The M2 has six firing port weapons fired from within the crew compartment. The M2 and M3 are identical except for internal stowage and seating differences and the absence of firing port weapons in the M3. With their tremendous improvements in mobility, firepower, and armor protection, these vehicles give mechanized infantry a true mounted combat capability and improve the ability of armored reconnaissance elements to perform their scouting and security missions.

The first vehicle was delivered to the Army in 1981. To date, 1,100 vehicles have been funded.



BRADLEY FIGHTING VEHICLE

Antitank Weapons

The infantry has a family of weapons to combat the armor threat. Current members of that family are the TOW (long-range), DRAGON (medium-range), and light antitank weapon (LAW) (short-range).

The TOW, which can be fired from the ground or mounted on helicopters, tracked vehicles, and tactical wheeled vehicles, is the main guided antitank weapon of the Army. Improved warheads and guidance systems are beginning to enter the force, increasing TOW's capability against new Soviet armor and improving its ability to operate in conditions of poor visibility. Conversion of some existing missiles to improved configurations and procurement of approximately 9,000 to 12,000 improved missiles each year is programmed through 1985.

The Army is examining the need to replace the DRAGON with a more capable man-portable antiarmor system. This conceptual system, to be named RATTLER, is also intended to replace the European MILAN in accordance with a tentative US, UK, French, and German agreement to divide responsibility for development of the next generation of antiarmor weapons development.

VIPER, a shoulder-fired antitank weapon, will replace the LAW. The VIPER has greater range, accuracy, and lethality than the LAW. Procurement of VIPER has begun; the Army plans to purchase approximately 150,000 through FY 1983.

Helicopters

By 1987, the Army is scheduled to have 1,390 combat attack helicopters. Almost two-thirds of these will be the AH-1S COBRA TOW. Fifty percent of the AH-1S

force will be upgraded by adding a 20mm gun, TOW missile management subsystem, fire control system, and survivability equipment.

By 1987, the Army is also scheduled to have 4,111 trooplift helicopters for combat support — 706 new UH-60As and 3,405 UH-1Hs. The UH-60 is more survivable, reliable, and maintainable than the UH-1H, and can carry more combat troops. The UH-60A is replacing the older UH-1H in selected combat aviation companies, air cavalry, and medical evacuation units. Plans for the UH-1H include a service life extension program, since the Army will continue to rely heavily on it for command and control, medical evacuation, liaison, transport, and electronic warfare until the year 2000.



UH-60

The Army's fleet of over 440 CH-47 transport helicopters will be rebuilt over the next several years. The reconstructed helicopters, designated CH-47D, will have significantly increased payload, performance, and improved maintainability. The CH-47D will have the expected service life of new helicopters, but cost considerably less than completely new airframes.

The Army's AH-64 advanced attack helicopter is completing full-scale engineering development and is scheduled to enter production in 1982. Delivery will begin in 1984 and IOC is planned for 1985. The AH-64 will have the HELLFIRE antitank missile, also entering



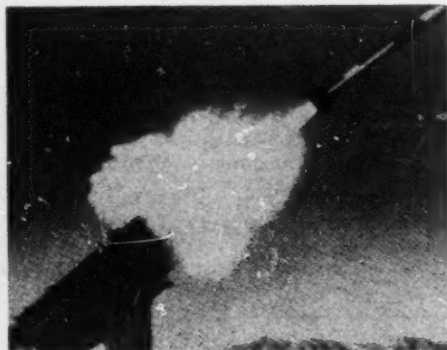
AH-64

production in 1982, plus a 30mm automatic gun and 2.75mm rockets.

Air Defense Weapons

STINGER is a man-portable air defense missile system developed to replace the REDEYE. The STINGER's improved infrared-seeker guidance system makes it much less vulnerable than REDEYE to countermeasures. STINGER became operational with some units in 1981 and will eventually be standard equipment for Army teams, RC Army teams and Marine Corps units.

Two new systems, PATRIOT and Division Air Defense (DIVAD) Gun, will greatly increase the Army's air defense capabilities against a variety of aircraft approaching at different altitudes. PATRIOT will replace NIKE HERCULES and the improved HAWK as the principal weapon for defense against aircraft at high or medium altitudes. The US plans to deploy PATRIOT battalions in Europe and CONUS; each battalion will consist of six batteries equipped with eight four-tube launchers — a total of 192 missile tubes.



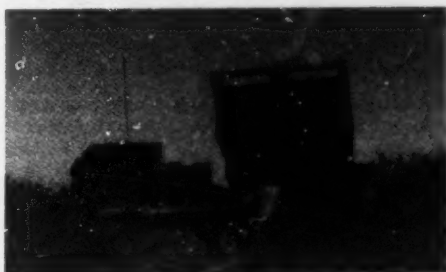
PATRIOT

The DIVAD Gun will give the Army a more mobile, longer-range weapon to accompany and protect mechanized units in combat, and is intended to replace the VULCAN system, which can operate only in fair weather and daylight. The Army plans to convert VULCAN batteries to DIVAD. Each battalion will consist of 36 DIVAD fire units (3 batteries) and 24 CHAPARRAL fire units (2 batteries).

The introduction of ROLAND on a limited scale will provide an all-weather short-range air defense missile capability for terminal defense of critical assets.

Artillery

Procurement of the Multiple-Launch Rocket System (MLRS) began in 1980. Germany, France, and the UK are partners with the US in this program. The MLRS will give the ground forces enhanced fire power to suppress enemy artillery and air defenses, and introduce a new capability to interdict enemy operations beyond cannon range. The MLRS may also incorporate a chemical warhead and terminal guidance warheads capable of killing tanks and other armored vehicles. Procurement of 333 self-propelled launchers is programmed.



MLRS

Procurement of the COPPERHEAD 155mm laser-guided projectile began in 1980; the projectiles will significantly improve the antiarmor capability of existing US artillery.

High Technology Test Bed

The Army intends to exploit technological opportunities to create an improved infantry division. Currently the 9th Infantry Division at Fort Lewis, Washington, is serving as the test bed. Tests and experiments are being directed toward development of a division which is more rapidly deployable and meets requirements for lean, hard-hitting forces. The improved capabilities of this division will substantially improve the US capability to respond to contingencies throughout the world.

NAVY GENERAL PURPOSE FORCES

US national interests require the US Navy to have a clear margin of maritime superiority over the Soviet Union. The continuing buildup of Soviet naval strength, coupled with the decline in US force levels, has not only eroded the favorable balance which has existed since the Second World War, but also led to a situation where the US Navy is unable to meet all of its peacetime commitments adequately. The need to meet a three-ocean

requirement has resulted in ship operating tempos exceeding those reached during the height of the Vietnam war.

By the end of FY 1983, Active Navy general purpose forces will total 464 ships, 13 carrier air wings, and 24 maritime patrol squadrons. The ships will include 13 deployable aircraft carriers, 205 surface combatants, 99 attack submarines and 80 amphibious ships — an increase of one carrier air wing and 16 ships above the FY 1982 levels. Battle forces of the Navy will consist of 536 ships plus carrier air wing and maritime patrol aircraft. The capabilities of these forces are improving, the average age of the fleet is decreasing, and the quality of the force is being upgraded by the introduction of new systems.

Intelligence projections forecast a slight decrease in the number of Soviet submarine forces, but a substantial improvement in their sophistication. The Navy continues to maintain balanced and effective ASW capabilities to counter this threat, but the growing capability of Soviet submarines and clear improvement in their tactical employment and coordination have highlighted several areas in which there is still risk for the US.

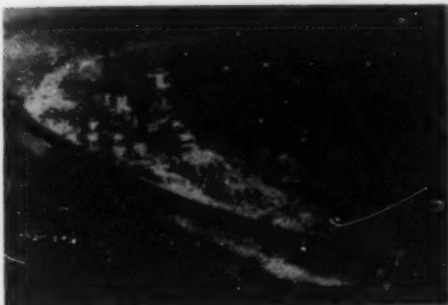
Amphibious warfare capabilities remain substantial, but require modernization. The US Navy has the aggregate lift capability in modern 20-knot ships to project the assault echelon of one Marine Amphibious Force (MAF). Due to scheduled retirements of LSD-28-class ships and negligible procurement in recent years, amphibious force levels will remain constant.

The US mine countermeasures force consists of 25 obsolete ocean minesweepers, 22 of which are in the Active Reserve fleet, and three airborne MCM squadrons equipped with 23 RH-53 helicopters. These forces are limited in their ability to counter an unopposed mining effort by the Soviets, who possess the largest stockpile of naval mines in the world. A major program is underway to upgrade US MCM capabilities; new MCM ships are planned. The US will continue to rely heavily on the NATO Allies to provide MCM forces.

US dependence on the seas and security commitments to approximately 40 nations overseas require a Navy capable of maintaining the security of SLOCs and projecting global offensive striking power, even within the combat radii of land-based Soviet air power, submarine, and surface forces. Major priorities of the Navy program include:

- Shipbuilding and conversion, with emphasis on ships having long-range offensive striking power.

The FY 1982 Budget calls for a total of 28 ships — 17 new construction ships and 11 conversions — at a cost of about \$8.9 billion. This program includes reactivation of the battleship NEW JERSEY as a platform to launch TOMAHAWK and HARPOON cruise missiles and to provide major caliber guns for naval gunfire support.



BATTLESHIP, USS IOWA

- Procurement of aircraft at rates sufficient to exceed attrition. This objective requires at least 330 aircraft per year. In FY 1982, the Navy will procure 283 aircraft at a cost of \$9.3 billion. While this number is below that required to meet attrition, it is well above levels procured in recent years. The Navy will build up to 400 aircraft each year by 1985 and maintain that rate through the 1990s.
- Service life extension and conversion of selected aircraft and ships to continue operations with hardware and systems in the inventory and in some cases, provide a dramatic increase in performance with newly available technology.
- Recruitment and retention of trained manpower. Although this remains critical, there have been recent improvements. The pay raises and special incentive payments approved in FY 1981 and FY 1982 were essential in reducing further aggravation of the Navy's critical shortages of mid-grade petty officers and officers. These shortages (over 22,000 petty officers) will be eliminated only with years of exceptional retention spurred by competitive compensation. Retention rates for both first-term and career personnel were higher in 1981 than 1980. The Navy also met its recruiting goals for 1981, and the increased quality of these recruits was reflected by both the improved percentage of high school diplomas and scores on the Armed Forces Qualification Test.

Navy Modernization

To support the objective of rebuilding a Navy capable of achieving an essential margin of maritime superiority, there must be an appropriate balance between new construction and force improvements. Several ongoing and planned major programs which support that objective are discussed below.

Aircraft Carriers

The US currently has 12 deployable aircraft carriers. The VINSON, now under construction, will join the fleet in 1982 as the thirteenth. The CORAL SEA, which was to be reduced to the status of a training carrier, will be kept in deployable status because of the increased requirements placed on the carrier force by events in Southwest Asia and the Indian Ocean. The eight conventional carriers of the FORRESTAL- and KITTY HAWK-classes are in the last five years of their 30-year service lives and are being rotated through a service life extension program. This major overhaul will add about 15 years to their lives. Current plans call for the delivery of a nuclear-powered aircraft carrier in late 1986. The Navy has requested authorization and full funding in the FY 1983 Budget for two more nuclear-powered aircraft carriers. Efforts will be made to establish delivery dates of early 1990 and early 1991.

Cruisers

The TICONDEROGA, a guided missile cruiser, was launched in April 1981. Four ships of the TICONDEROGA-class are under contract; 3 more have been authorized by Congress and the Navy proposes to fund construction of 17 more between FY 1983 and FY 1987. The TICONDEROGA will be the first ship equipped with the US Navy AAW weapon system (AEGIS). AEGIS, a computerized battle management fire control system coupled to a phased-array air search radar, will permit TICONDEROGA-class cruisers to engage multiple attacking aircraft and the most advanced Soviet antiship cruise missiles in the face of heavy electronic countermeasures. AEGIS can control a number of anti-air weapon systems and has the potential for coordinating the fire of several ships.

Amphibious Ships

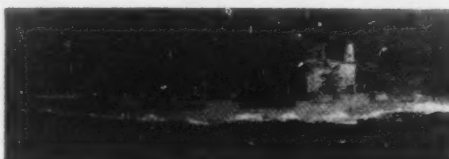
The keel of WHIDBEY ISLAND, first of the new LSD-41-class of amphibious assault ships, was laid in August 1981. This class will replace the LSD-28 amphibious ships, which are reaching the end of their service lives. The LSD-41 will be able to operate with either conventional landing craft or the new 50-knot air-cushion landing craft. Six air-cushion landing craft will be delivered to the fleet by 1986.



LSD-41 WITH AIR-CUSHION LANDING CRAFT

Mobile Logistic Support Force

The first two ships of a new class of five fleet oilers, CIMARRON and MONONGAHELA, were commissioned in 1981. The remaining three ships will join the fleet in 1982 and 1983. These ships have improved underway replenishment equipment and communications systems, and antiship missile defense combat systems. The ACADIA, second of a new class of six surface combatant tenders, was delivered in 1981. Delivery of the third and fourth tenders is scheduled for 1982 and 1983. These mobile repair facilities are equipped to service modern cruisers (including nuclear ships), destroyers, and frigates.



FLEET OILER, USS CIMARRON

Air Defense

The threat posed by Soviet aircraft and antiship cruise missiles is growing steadily with the continuing introduction of improved delivery platforms; weapons systems; ECM equipment; surveillance, tracking, and targeting systems; and command and control equipment. This threat demands highly effective anti-air warfare (AAW) systems to provide defense in depth. The introduction of TICONDEROGA-class AEGIS cruisers and ongoing deployment of the E-2C early warning aircraft, PHOENIX missile-equipped F-14 fighters, and EA-5B electronic warfare aircraft will significantly strengthen

battle group AAW defenses. Additionally, 26 surface ships have been equipped with PHALANX, an automatic, self-contained weapon with a 20mm gun, radar, and digital fire control system. The PHALANX provides a fast-reaction terminal defense against low-flying high-speed antiship missiles. The Navy has scheduled more PHALANX installations for the coming year.



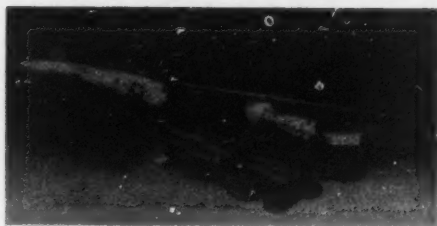
EA-6B

Cruise Missiles

The HARPOON antiship cruise missile has been fitted on about 120 surface combatants of various classes and about 80 more will have it by 1986. Seventy-six P-3 land-based patrol aircraft are equipped for the HARPOON; the Navy plans to equip 300 P-3 aircraft by 1985. Carrier-based A-6 attack aircraft are also being modified to carry HARPOON. The TOMAHAWK cruise missile, which will be operational in 1982, will add to the Navy's long-range offensive capability. TOMAHAWK variants are designed for use against surface ships or land targets. The TOMAHAWK is to be carried by several classes of submarines, cruisers, and destroyers and the IOWA-class battleships that are to be reactivated.

Aircraft

The F-14, designed for fleet air defense and offensive air-to-air combat, is the Navy's best operational air superiority fighter. Procurement of 539 aircraft will be completed in 1984. Eight of the Navy's 13 aircraft carriers already operate F-14s and more will receive them in 1982. The F/A-18 aircraft, which will replace the F-4 and the A-7 in the Navy and Marine Corps, is to have both



F-14

air-to-air and air-to-ground capabilities. The Navy plans to procure more than 1,300 F/A-18s. The AV-8B, a variant of the AV-8A HARRIER incorporating significant improvements in vertical takeoff and landing performance, is being procured as a replacement for Marine light attack aircraft.

Submarines

By March 1982, eight POLARIS-class SSBNs will have had their ballistic missiles removed and been redesignated SSNs. Seventeen LOS ANGELES-class nuclear-powered attack submarines (688-class SSNs) have been commissioned and 22 others authorized. These quiet submarines have a high submerged speed and improved sensor and weapon systems to counter new classes of Soviet submarines.

Thirty-six nuclear-powered attack submarines are equipped with HARPOON antiship cruise missiles. The Navy plans ultimately to equip all nuclear-powered attack submarines with fire control systems for launching cruise missiles and to arm them all with HARPOON and long-range TOMAHAWK cruise missiles. The Navy also plans to increase the firepower of LOS ANGELES-class SSNs by incorporating an external vertical-launch capability. Design is proceeding on a new bow, which will house 12 TOMAHAWKS (both land-attack and antiship versions). By 1985, new-construction submarines will have this external launch capability; previously delivered LOS ANGELES-class hulls are to be retrofitted.

The MK-48 torpedo, principal weapon for all US attack submarines, is being modified. The guidance system will be upgraded to track enemy submarines better and operate against sophisticated electronic countermeasures. These modifications are designed to enable the MK-48 to counter any existing Soviet submarine as well as those expected to enter the Soviet inventory. The modified MK-48 will begin to enter the fleet in 1986.

Communications

Secure, survivable, and interoperable C³ capabilities are essential for effective employment of naval forces. The Navy is pursuing a number of programs to improve these capabilities: the multi-Service TRI-TAC program will provide a common family of communications equipment. Jamming protection will be provided by Jam-Resistant Secure Communications at Navy facilities for critical NCA communications links to operational commanders. The Single Channel Ground Air Radio System will replace fleet radios to insure interoperability with other Services. The Joint Tactical Information Distribution System will provide a secure jam-resistant means of passing tactical voice and digital data in an EW environment.

AIR FORCE TACTICAL FORCES

Air Force tactical air forces must be able to deploy worldwide and conduct prompt, sustained air operations at any level of conflict. Most tactical aircraft are designed to conduct one or more of the fundamental missions of offensive and defensive counterair, close air support, and interdiction. Supporting these missions are assets which provide capabilities for force projection, defense suppression, logistics, and reconnaissance. Special operations forces also contribute to theater war-fighting capabilities. Deficiencies in readiness, deployability, and sustainability would limit the effectiveness of tactical forces in carrying out national strategy, particularly if it were necessary to operate in multiple theaters simultaneously. In addition, vastly improved Soviet tactical warfare forces and defensive systems have eroded the qualitative advantages US tactical air forces have enjoyed in previous years.

The tactical fighter force consists of 24 Active and 12 Air Reserve Force wing equivalents. The force consists of a variety of aircraft with varying capabilities. The A-10, designed solely for close support of friendly ground forces, is at the low end of the performance spectrum. Active and reserve units in the United States, Europe, and Korea are equipped with 444 of these aircraft. At the center of the performance spectrum, 276 F-16s provide a multimission capability, combining high performance, versatility, and excellent sortie rate generation in the air-to-air and air-to-surface arenas. The F-15 performs at the high end of the performance spectrum, primarily as an air superiority weapons system. Tactical units in the United States, Europe, and the Pacific are equipped with 396 of these all-weather fighters. Accompanying this force are 240 F-111s providing long-range, night, and all-weather interdiction capability; 792 multirole F-4s, which have long been the mainstay of USAF fighter forces; and 324 A-7s for use primarily in the air-to-ground role. All tactical fighters are capable of in-flight refueling.

Tactical reconnaissance is provided by 252 RF-4s, organized into 6 Active and 8 Air National Guard squadrons. These aircraft collect timely and accurate information on enemy forces and activities for battle management and targeting. To combat the dense and sophisticated electromagnetic threat environment facing US tactical forces, 84 F-4Gs and 5 EF-111s provide defense suppression in all theaters. Additional support is provided by 25 E-3A Airborne Warning and Control Systems; 7 EC-130 Airborne Command, Control, and Communications aircraft; 239 OV-10, O-2, and OA-37 Tactical Air Control Systems; and special operations forces consisting of 13 MC-130Es, 10 AC-130As, 10 AC-130Hs, and 9 HH-53H, 10 UH-1N, and 6 CH-3E helicopters.



MC-130E

National strategy requires that tactical air forces be capable of deploying rapidly to Europe and other areas of the world, perhaps simultaneously. Air Force power projection capabilities are limited by deficiencies in logistics, air refueling, airlift support, and transportable C³ systems.

Airbase survivability and recovery are crucial for generating enough aircraft sorties over a sustained period to achieve military objectives. US tactical air forces are currently constrained by limited capabilities to defend and recover airbases from an enemy attack. Improvements are needed in the areas of ground defense, point air defense, chemical defense, passive defense, explosive ordnance disposal, rapid runway repair, alternate launch and recovery surfaces, casualty care, and short take-off and landing facilities. Additionally, construction of aircraft shelters, CW protective facilities, POL and munitions storage, and dispersed aircraft parking is required in a number of regions.

Force employment at night and in adverse weather is constrained by the inability of tactical forces to operate effectively in these conditions. In all regions, the Air Force will confront opposing air, sea, and ground forces which possess improving capabilities for continuous combat. The F-111 is the only tactical fighter which can attack deep interdiction targets at night and in poor weather conditions.

The lack of an adequate defense suppression capability increases the vulnerability of tactical forces in today's threat environment. A complementary mix of lethal and non-lethal defense suppression capabilities is needed. Expanded reconnaissance and command and control capabilities are necessary to assure the effective use of airpower.

The previously planned procurement of 34 E-3As has been increased to permit more extensive North American air defense coverage to better deter a Soviet covert

bomber attack on our strategic C³ and other time-sensitive targets. Additionally, funds are being added to increase AWACS flight operations over North America in the near-term to deal with the Soviet covert bomber attack threat.



AWACS

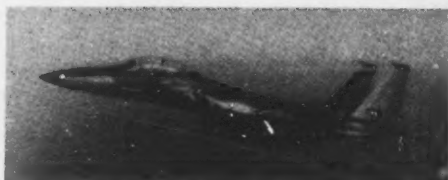
Efforts are underway to improve the readiness, deployability, and sustainability of tactical forces. The recent procurement of spare parts for aircraft and support systems, which have been seriously underfunded in the past, will improve the mission capability of fighters and allow them to fly at increased sortie rates. Conformal fuel tanks for F-15s (which give them the ability to fly non-stop to Europe); increased airlift capacity by modification of civil DC-10s and 747s, and increased military airlift utilization rates will enhance force deployability. The programmed purchase of additional munitions in FY 1982 and subsequent years will allow tactical forces to sustain combat operations in more than one theater.

Retention and recruitment of quality personnel has been improved by the increased benefits and career incentive programs instituted recently. Improved training programs have been initiated to prepare individuals for skill requirements demanded by the sophisticated weapons systems of the tactical air forces.

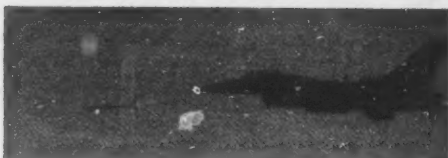
A small force growth has been planned to counter qualitative and quantitative improvements to general purpose forces fielded by the Soviet Union, its allies, and surrogates. Continued procurement of F-15 and F-16 aircraft will insure that this force is equipped with improved fighting systems in greater quantity.

Air Force Modernization

Planned tactical force modernization includes procurement of new aircraft and munitions which will enable the USAF to counter the future threat effectively.



F-15



F-16

Emphasis is being placed on modernizing Reserve as well as Active forces. Enhanced versions of today's fighters, which are currently in development, will improve combat capabilities and allow operations in a wider range of environments than is now possible. Increased procurement will allow retirement of older, less capable aircraft, with a corresponding decrease in the average age of the fighter force. Planned munitions enhancements are designed to offset deficiencies, particularly in the areas of heavy armor kill and airfield attack.

Fighter and Attack Aircraft

Tactical fighter and attack forces are being modernized through procurement of new aircraft and modification of older systems. Though A-10 production will end in FY 1983, F-15 and F-16 production will continue into



A-10

the 1990s. These aircraft will replace less modern active aircraft which, in turn, will replace still older systems in the reserves. In the 1980s, A-10s and F-16s will be used to equip some Air National Guard and Air Force Reserve units. Continuing reserve aircraft modernization is necessary since 34 percent of the tactical air forces are assigned to the Air Reserve Forces. F-15 and F-16 variants, enhanced for night and adverse weather capability and extended range operations, are being developed. These fighters will improve the capability of US forces to fight in all environments and augment the aging F-111 force by their ability to attack distant targets in adverse flying conditions.

Special Operations Aircraft

Special operations aircraft are being modernized by the addition of 10 MC-130H COMBAT TALON aircraft. This version of the MC-130E will provide better range; payload; and improved C², ECM, and avionics systems. Procurement of the AH-X special purpose helicopter in FY 1986 will overcome shortfalls in medium lift capability.

Munitions

Significant improvements have been made to the AIM-7 (radar) and the AIM-9 (infrared) air-to-air missiles, enhancing their kill potential and allowing them to operate more effectively in the expanded performance envelope dictated by today's modern fighters. The advanced medium range air-to-air missile (AMRAAM) will provide the aerial combat capability necessary to meet the projected threat of enemy air-to-air weapons through the end of this century. AMRAAM will provide a beyond-visual-range capability for the F-16, and launch-and-leave capability for both the F-15 and F-16.

Several air-to-surface munitions now entering production will significantly improve weapon effectiveness and expand the scope of battlefield targets that can be attacked by US attack aircraft. GBU-15 and low level laser-guided bombs provide pinpoint accuracy, while allowing the delivery aircraft to maneuver freely and release weapons outside the effective range of defensive fire. GATOR mines will provide a capability to disrupt and delay the movement of armor and support vehicles, and antiarmor cluster munitions will provide multi-vehicle kills of massed armor on the battlefield or in staging areas. The DURANDAL airfield attack weapon will provide runway cratering and shelter penetration of reinforced concrete structures. Infrared imaging MAVERICK air-to-surface missiles will improve the ability of US ground attack forces to kill targets at night. The high speed antiradiation missile will provide an effective weapon for the F-4G active defense suppression platform, enabling it to counter threats in the mid-80s and beyond.

MARINE CORPS GENERAL PURPOSE FORCES

US global interests require that naval and air forces keep sea lines of communication open and project power ashore. Amphibious task forces have the means to seize, occupy, and defend areas critical to the preservation of the SLOCs. Marine Corps forces offer a wide range of employment capabilities, foremost of which is their ability to conduct forcible entry on a hostile shore.

Although Marine Corps forces, active and reserve, are structured primarily to conduct amphibious operations, Marine Air Ground Task Forces provide an inherent flexibility to respond rapidly by airlift or sealift to a wide variety of contingencies. During FY 1983, the Marine Corps will maintain three Marine Amphibious Forces within its active structure, one in the Western Pacific and one on each coast of the United States. The Marine Corps Reserve, the 4th Marine Division/Wing Team, will continue to be sized and structured to augment and reinforce selectively the three active MAFs under mobilization conditions.



AMPHIBIOUS ASSAULT SHIP, USS TARAWA

The capability to conduct two simultaneous MAF amphibious assaults is essential to execute the amphibious requirements of the national strategy with an acceptable degree of risk. The present inventory, however, provides only enough lift for one MAF assault echelon. The attainment of the amphibious lift capability for two MAFs will require a substantial increase in the amphibious ship building rate over that currently programmed.

Combat service support will be substantially improved by the Field Logistics System. This system, which includes the procurement of motor transport; engineer, materials handling, water purification, and utilities distribution equipment; shelters; and containers, represents a much needed increase in logistics capability. The Field Logistics System family of equipment will give

the Marine Corps an added dimension in combat service support and enhance logistics support capabilities to the Active Fleet Marine Forces.

Although the Marine Corps is not programming a major force structure expansion, a balanced, evolutionary program of structural modification is underway. A restructured infantry battalion, with a 10 percent manpower reduction, will have significantly increased firepower and mobility as a result of the introduction of new and improved weapon systems. Manpower savings realized from restructuring will allow the formation of new light armored vehicle battalions and an increase in the number of artillery battalions. Light antiaircraft missile battalions are being reorganized to provide increased air defense capabilities. Additionally, Forward Area Air Defense (REDEYE/STINGER) units will increase from one to four platoons in each of the active aircraft wings. Other changes include restoring communications battalions to full strength and increasing Reserve combat service support structure.

The Marine Corps is involved in two innovative pre-positioning programs which will contribute substantially to rapid deployment and sustainability. First, the Marine Corps is planning to pre-position equipment and supplies to support a Marine Amphibious Brigade in Norway. The program objective is to pre-position selected additive items of unit equipment and heavyweight/high-volume material to reduce airlift requirements and improve closure time for forces earmarked for the rapid reinforcement of NATO. Second, the Marine Corps, in concert with the Navy, will maintain the Near-Term Pre-positioning Force Program while the Maritime Pre-positioning Ships Program is being implemented. The ships, stationed at Diego Garcia in the Indian Ocean, would steam when directed to a designated developed port in the crisis area for offload and marry up with Marines arriving via airlift. The NTPF provides a capability to introduce or rapidly surge a Marine Corps force into a permissive environment and significantly improve the US capability to meet Southwest Asia contingency requirements.

Regional pre-positioning initiatives complement the Marine Corps' capability for global commitment. This pre-positioned material must continue to remain additive and not detract from the logistic support already available to Marine forces. While pre-positioning, both ashore and afloat, enhances strategic mobility for selected scenarios, the timeliness and mode of committing Marine forces must remain free of pre-positioning constraints. Pre-positioning must be developed as an adjunct to — and not as a substitute for — adequate amphibious lift.

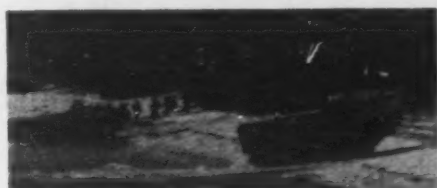
Manpower initiatives are targeted at fuller manning for the existing structure both in the ground and air components. Although the Marine Corps anticipates no difficulty in achieving an FY 1983 active end-strength of approximately 194,000, continued emphasis will be placed on programs to attract and retain adequate numbers of qualified personnel. Additionally, current programming provides for sufficient personnel to bring Reserve units to full wartime strength by FY 1986. Recognizing that readiness is directly affected by the degree to which the needs of a Marine and his family are satisfied, the Marine Corps will continue to support efforts to maintain military pay at competitive levels and improve quality of life.

Marine Corps Modernization

A program of selective weapons modernization will significantly enhance Marine Corps capabilities in the 1980s. Emphasis in Marine Corps ground forces will be placed upon increasing and improving tactical mobility and firepower, while modernization of the aviation component will focus on the replacement of aging aircraft and improvements in command and control systems.

Ground Elements

In FY 1983, the Marine Corps will increase firepower in both the infantry and artillery, provide for a greater antitank capability, and improve tactical mobility. The modernization of weapons systems within the infantry battalion will significantly enhance the capabilities of Marine Corps ground combat forces. Improvements in the M-16 rifle, the basic infantry weapon; the introduction of the Squad Automatic Weapon; and incorporation of the .50 caliber heavy machinegun into the infantry battalion will provide increased firepower at greater ranges against personnel and light armored vehicles. A new 40mm heavy machinegun will provide the infantry battalion a heavy automatic weapon capable of defeating infantry and penetrating armored assault vehicles at ranges up to 2,200 meters. The improved 81mm mortar, to be introduced in 1984, will provide additional range even though 17 pounds lighter than the present mortar.



MARINE LANDING EXERCISE

Antimechanized capabilities will be enhanced by replacement of the current light antitank weapon with an improved version of the same weapon, the addition of light antitank DRAGON teams to each infantry battalion for a total of 32, and the introduction of a TOW platoon with 24 teams at the regimental level. Addition of the TOW platoons will double the antimechanized capability of each division.

Artillery battalions will possess significantly increased flexibility, lethality, and range with the introduction of the M198, a 155mm towed howitzer, scheduled to replace both the 105mm howitzer and the current 155mm howitzer. With the formation of three target acquisition batteries by FY 1988, artillery counterbattery fire will be significantly improved.

The landing vehicle tracked (LVT), which provides ship-to-shore capability in an amphibious operation and armored mobility for subsequent operations ashore, will be modernized commencing in FY 1982. Major improvements include a new engine, nonintegral fuel tank, and an electric weapons station. Service life of the LVT will be extended into the 1990s. In addition, 329 LVTs are being purchased for the maritime pre-positioning ships (MPS). Introduction of the Light Armored Vehicle in FY 1983, with its superior mobility and firepower, will provide the Marine Corps with enhanced capabilities against enemy ground forces.

The Marine Corps also continues to work with the Army on development of the Mobile Protected Gun System (MPGS), a lightweight, highly mobile, well protected, and lethal direct fire weapons system. Transportable by CH-53 helicopter, the MPGS is expected to be in the inventory by FY 1988. The MPGS will not replace existing systems, but will provide the helicopter-borne force with a direct fire support weapon capable of defeating projected Soviet armored vehicles, material, and personnel in the 1990s.



LVT

Aviation

Marine Corps Aviation is focusing its modernization efforts on the CH-53E, F/A-18, and AV-8B. The CH-53E helicopter, with its 18-ton lift capacity, will be capable of moving 90 percent of the items in the Marine Corps equipment inventory. The aircraft is currently entering the fleet; the first two squadrons will become operational during FY 1983.



CH-53

Marine Corps fighter/attack capabilities will improve significantly in FY 1983 when the first three squadrons complete transition from the F-4 to the F/A-18. The internal configuration of the F/A-18, both in terms of hardware and software, is identical for fighter and attack missions. The F/A-18 incorporates advanced technology and can deliver air-to-ground ordnance with about four times the accuracy of the F-4. The F/A-18, which carries SIDEWINDER and SPARROW missiles, is a highly maneuverable and formidable fighter aircraft. The AV-8B is scheduled to be operational by FY 1985, with the transition of eight active light attack squadrons



AV-8

completed by FY 1989. Planning will also continue for modernization of the Marine Air Reserve to alleviate severe aircraft shortages and fleet obsolescence and to insure compatibility with the active force.

Command and Control

Marine Corps efforts to advance command and control capabilities for both ground and air components will continue during FY 1983. The Intelligence Analysis Center, which is scheduled for IOC in FY 1983, will automate intelligence activities at the MAF level.

An assortment of new tactical communications equipment will be operational in the Fleet Marine Force by FY 1983. The AN/PRC-104 family of HF radios, VINSON and PARKHILL COMSEC equipment, AN/GXC-7A facsimile equipment, AN/UGC-74 teletypewriter equipment, AN/TSC-96 satellite terminal, and a new portable UHF ground-to-air radio will significantly enhance the reliability and operational effectiveness of the Marine Corps tactical communications system. Additionally, the Marine Corps will continue procurement of the revolutionary hand-held Digital Communications Terminal (DCT). Beginning in FY 1984, the DCT will greatly enhance the speed, reliability, and security of tactical radio transmissions.

MOBILITY FORCES

The capability to deploy and sustain combat ready military forces anywhere in the world is dependent upon airlift and sealift forces. Demands for increased lift and resultant shortfalls have necessitated increased investments in US mobility forces.

Airlift

Airlift resources assigned to the Military Airlift Command (MAC) and committed to the Civil Reserve Air Fleet for intratheater and intertheater movement of cargo and passengers are shown in Chart A-1. In addition, some NATO countries have committed long-range cargo aircraft to transport US reinforcements to Europe in the event of war. Similar commitments by other countries are being pursued.



C-5

Efforts are underway to enhance US military airlift capabilities. The C-141 fuselage stretch/air refueling modification program will be completed in mid-1982, increasing cargo carrying volume by 30 percent and extending the nonstop range. At present, the C-5 is the only US aircraft capable of carrying outsize cargo such

AIRLIFT FORCES

MAC		CRAF	
TYPE	NUMBER (ACTIVE / RESERVE)	TYPE	NUMBER**
C-5	70 / 0*	DOMESTIC	44
C-141	234 / 0*	ALASKAN	12
C-130	219 / 294	SHORT-RANGE INTERNATIONAL	29
C-7	0 / 16	LONG-RANGE INTERNATIONAL (PASSENGERS)	215
		LONG-RANGE INTERNATIONAL (CARGO)	100

* C-5 AND C-141 AIRCRAFT ARE JOINTLY OPERATED BY ACTIVE AND ASSOCIATE RESERVE UNITS.

** THE CRAF CONSISTS OF THREE STAGES. NUMBERS SHOWN ARE CRAF STAGE III.

AS OF 1 DECEMBER 1981

CHART A-1

as self-propelled howitzers, fighting vehicles, and attack helicopters. To preserve this capability, the C-5 force is undergoing a wing structure modification to extend aircraft service life by 30,000 hours. The FY 1983 Budget request also contains funding for C-5/C-141 spare parts which will enable the force to attain objective wartime utilization rates by FY 1986.

Effective use of airlift aircraft requires adequate aerial port manpower and materiel handling capabilities. Current funding will increase manpower and materiel handling equipment to balance aircraft and aerial port capability by FY 1985. Initiatives include the acquisition of wide-body aircraft handling equipment and other aerial port support equipment required for conducting airlift operations in remote areas.

Sealift

The strategic sealift force consists primarily of those ships listed in Chart A-2. During a crisis requiring increased sealift assets, the Military Sealift Command controlled fleet, augmented by chartered ships from private industry, would be the first sealift force available. Ready Reserve Force (RRF) ships would next become available. The RRF, a component of the National Defense Reserve Fleet (NDRF), is a joint Navy-Maritime Administration program designed to have inactive reserve ships manned and ready for receiving cargo in 5 to 10 days. Next, the approximately 200 US Merchant Marine (USMM) ships enrolled in the Sealift Readiness

be activated within 21 to 60 days; they have less capability than those in either the USMM or the RRF. In a NATO emergency, the European NATO Allies could provide over 400 ships for the reinforcement of Europe.

Efforts are being made to improve sealift responsiveness in support of contingency planning for both NATO and Southwest Asia. These efforts involve increased planning and coordination with the Maritime Administration (MARAD). The objective is to insure that ships can be marshalled in a timely fashion from the USMM to augment MSC peacetime organic sealift. The RRF is also being upgraded and is programmed to grow to over 40 modern and capable cargo vessels by FY 1985.

In a Southwest Asia emergency, the US may only have the use of its own sealift capability. The difficulties associated with quickly transporting military equipment vast distances to potential crisis areas dictate that some ships be pre-positioned near the Southwest Asia littoral. To meet this requirement, seven near-term pre-positioning ships (NTPS) have been moored at Diego Garcia in the Indian Ocean since August 1980. These ships carry unit equipment; supplies; petroleum, oils, and lubricants (POL); and water for 15 days support for one Marine Amphibious Brigade, as well as ammunition, POL, and water for early deploying Army and Air Force units. These seven original NTPS ships have been augmented by six additional vessels to increase selected combat unit support to 30 days. Under the Maritime Pre-positioning Ships Program, part of this 13-ship Near-Term Pre-positioning Force will eventually be replaced by commercial ships that will carry pre-positioned equipment for three MABs.

SEALIFT FORCES

	DRY CARGO	TANKERS
MSC CONTROLLED FLEET	12	19
U.S. MERCHANT MARINE	158	119
READY RESERVE FORCE	31	0
NATIONAL DEFENSE RESERVE FLEET*	142	0
NATO POL**	400	0

* ALSO INCLUDED 17 PASSENGER SHIPS AND 4 LANDING SHIP TANKS

** ONE OUT OF A PAIR OF POL SHIPS COULD BE MADE AVAILABLE FOR NATO REINFORCEMENT

AS OF 30 SEPTEMBER 1981

CHART A. 2

Program (SRP) could be called up. The SRP provides time-phased delivery of USMM ships for defense purposes in situations where ship requisitioning has not been authorized. Following a Presidential declaration of national emergency, the remainder of the USMM and selected US owned foreign flag ships could be requisitioned under the Merchant Marine Act of 1936. Finally, the remainder of the NDRF could be activated under the authority of the Merchant Marine Act of 1936. Most NDRF ships are World War II Victory Ships which could



USNS MERCURY, N.T.P.S.

The Navy has acquired six high-speed, high-capacity SL-7 container ships and plans to acquire two more in FY 1982. These 33-knot vessels require conversion from container to roll-on/roll-off configuration to load and off-load Army unit equipment rapidly for transport to Europe or elsewhere.

Since a deployment of US forces into Southwest Asia may have to rely upon underdeveloped, damaged, or nonexistent port complexes, various cargo handling

facilities and support systems are being developed and procured. These systems include Army logistics-over-the-shore equipment, such as the Lighter Air Cushion Vehicle and bulk POL Tactical Marine Terminal and Navy Amphibious Logistic System equipment. The latter includes the Container Off-Loading and Transfer System and the Offshore Bulk Fuel System. A barge-carrying ship is also required to carry outsize temporary port facility equipment.

SPECIAL OPERATIONS FORCES

US special operations forces have great potential to bridge the gap in our national strategy at the pre-crisis and low-intensity end of the conflict spectrum, as well as complement other forces in times of war. Such forces have broad applicability to deterrence and defense requirements at all levels of conflict. In particular, special operations forces help deter Soviet and surrogate initiatives in the Third World by their capability to project US power where a larger conventional US military response may be inappropriate, infeasible, or premature. The utility of these forces, a function of their rapid deployability, flexibility, acceptability, and relatively low cost, helps to broaden national policy choices. Special operations forces in the structure today include the following Active and Reserve Component elements: Army — Special Forces, psychological operations units, counterterrorist and civil affairs units; Air Force — Special Operations Forces; and Navy — unconventional warfare units (Naval Special Warfare Groups, SEAL Teams, Special Boat Units, and Underwater Demolition Teams).



ARMY SPECIAL FORCES

To insure that special operations forces are capable of performing the demanding missions which might be assigned them, the procurement of modern mission-unique equipment must continue. Special emphasis

should be placed upon the development of a system for procuring off-the-shelf items, enhancement of USAF special operations aircraft, modernization of equipment to support military psychological operations, and R&D support of special operations requirements.

The current special operations forces levels reflect a serious shortfall in the number and types of units to meet requirements now and in the remainder of the decade. To offset this critical shortfall, a measured expansion of special operations forces is required.

LOGISTICS

Logistic support of dispersed forces continues to be a major constraint on the ability to meet US military objectives. Force modernization and peacetime readiness are of little value without the ability to sustain those forces in wartime. The current DOD priority for the improvement of the logistics support posture is encouraging. It is essential that these positive trends continue in order to achieve a healthy worldwide logistic base in the foreseeable future. Additionally, the trend toward increasing centralization and consolidation of Service logistics functions in pursuit of peacetime economies must be balanced with its impact on the capability of forces.

Southwest Asia

The United States must be capable of deploying and supporting military forces in this region in order to protect US and allied interests and sources of energy. The requirement to support a force deployed to Southwest Asia represents a significant logistics task, since the force would be distant from CONUS bases and established supply channels. Long lines of supply, the harsh environment, and lack of existing support within the region are formidable obstacles that must be overcome to support a force operating in Southwest Asia. Both near- and long-term actions will be required to insure US forces receive the necessary levels of support.

Although pre-positioning requirements have been met partially through afloat storage, the US must establish a network of land-based storage and transportation facilities to resupply combat and support forces. Host nation support agreements must be negotiated to provide facilities and rights of access, and military construction efforts must be continued. Completion of the current program and additional planned construction will provide facilities for pre-positioning of POL and munitions, and for other logistic support of the RDJTF.

Material Resources

Pre-positioned War Reserve Materiel Stocks (PWRMS) are essential to sustain combat forces world-

wide. Although PWRMS realized a slow but steady improvement in FY 1981, a continuing effort by the US and its allies is required to achieve desired levels of theater war reserve stocks. Gradual improvements in ammunition stocks parallel those of PWRMS; however, a sustained program of improvement is required in this area as well.

Petroleum

An ambitious inventory buildup program has brought the Defense Logistics Agency (DLA) wholesale fuel inventory to over 84 percent of the DLA wholesale fuel requirement. Further, increases in peacetime operating stocks and war reserves are planned for the budget and program years.

DLA has taken several steps to provide an assured supply for DOD mobility fuel requirements. Improved contracting procedures have been instituted and a Department of Energy commitment of 38,000 barrels per day of Naval Petroleum Reserve crude oil, with a potential increase of 100,000 barrels per day in April 1982, will provide 28 percent supply source assurance. Initiatives which enhance our POL posture and reduce dependence on foreign oil deserve continuing support.

Medical Support

Peacetime medical care continues to improve, but wartime capabilities remain inadequate. In the event of a major conflict, the US would be critically short of hospital beds and surgical operating rooms, and would experience difficulty in meeting medical logistics requirements. The staffing of theater medical units would require a significant drawdown of CONUS medical personnel, who would have to be replaced by civilian health care specialists. FY 1982 Service initiatives, when combined with FY 1983-1987 programs, are encouraging. Major medical programs which will improve multi-theater and RDJTF support include an increased hospital capability both ashore and afloat, additional host nation support, and the DOD-initiated Civilian Military Contingency Hospital System. The ability to enhance peace-



MEDICAL UNIT SELF-CONTAINED TRANSPORTABLE

time medical services and meet wartime medical requirements depends on the support for approved current and outyear programs.

Construction

While the FY 1981 and FY 1982 Budgets reversed underfunding trends of previous years and provided increased support for construction of necessary new facilities, funding for the modernization and replacement of existing facilities, particularly overseas, still lags far behind the requirement. The living and working conditions of personnel continue to be substandard in many locations, exacerbating retention and readiness problems. Additionally, the ability to mobilize rapidly is being degraded as World War II facilities become unusable or are deleted from the inventory.

Facility requirements can be met only through military construction (MILCON), host nation support, or the NATO Infrastructure Program. Host nations have been responsive to US needs and provided facilities throughout Europe and in the Far East. Land has been provided for infrastructure projects such as pre-positioning of materiel configured to unit sets (POMCUS), ammunition, and war reserve materiel storage. At a number of locations, joint use agreements have been concluded for Collocated Operating Bases (COBs). While there has been some success in obtaining facilities from its allies, the US is continuing to press for additional facilities to implement the master restationing plan and provide adequate family housing for US personnel.



POMCUS

The NATO Infrastructure Program only provides for the minimum military requirement, carefully spelled out in NATO criteria and standards. NATO is providing facilities for new systems such as PATRIOT, ground-launched cruise missiles, and PERSHING II, and is continuing to support minimum essential requirements for COBs, POL, and restoration of existing NATO facilities. The US is taking the initiative to convince the Allies of its needs and the requirement to increase funding for

support of new initiatives as well as previously approved but unfunded projects.

MILCON appropriations are required for those facilities not provided by host nations or through the NATO Infrastructure Program. The MILCON program, which addresses US requirements, demonstrates US resolve and provides bargaining power for more host nation construction.

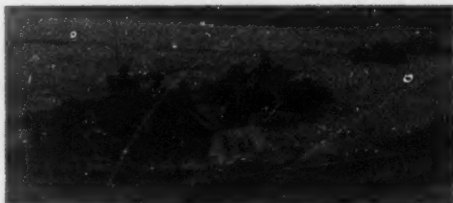
EXERCISE PROGRAMS

Joint and combined exercises are a primary means of evaluating and insuring total force readiness. Exercises test the US ability to respond to contingencies with appropriate levels of force and provide valuable experience in logistic and tactical force employment, including operations under unfamiliar environmental and geographic conditions. Joint exercises are essential for testing operation plans, improving C³ interoperability, and meeting joint readiness and training objectives. Combined exercises serve the same purpose, in addition to evaluating defense arrangements with US allies. These exercises are directed or coordinated under JCS guidance to preclude redundancy in exercise objectives and over-commitment of forces. In FY 1981, 17 joint/combined exercises were directed by the JCS; 69 required scheduling coordination by the JCS; and numerous others were conducted by the commanders of unified and specified commands.

Exercise OCEAN VENTURE 81, the largest US maritime exercise in recent years, took place in the waters of the South Atlantic, Caribbean, North Atlantic, and Baltic Sea from August through October 1981. More than 120,000 personnel, 250 ships, and 1,000 aircraft from 14 countries participated in the exercise, which was designed to demonstrate and improve the capability of US and Western maritime forces to protect and maintain free use of sea lines of communication. While OCEAN VENTURE 81 was primarily a maritime exercise, units from all the Services and the Coast Guard participated. The exercise addressed all aspects of maritime operations, including naval battle group, maritime air, Marine amphibious, and sea surveillance operations. In addition, exercise events included Army airborne and air assault operations, and Air Force airlift and tactical air operations.

In Exercise TEAM SPIRIT 81, US Army, Navy, Air Force, and Marine Corps units joined with Republic of Korea counterparts for joint/combined maneuvers involving over 100,000 troops. The exercise involved forces currently stationed in Korea, other locations within the Pacific Command, and CONUS. The purpose of TEAM SPIRIT was to exercise deployment, reception

and employment of ROK and US forces responding to possible contingencies on the Korean Peninsula. US participants included forces stationed in Korea, Army elements from Hawaii and CONUS, Seventh Fleet units, to include a Navy/Marine Amphibious Task Force, and Air Force tactical fighter units from the Pacific and CONUS.



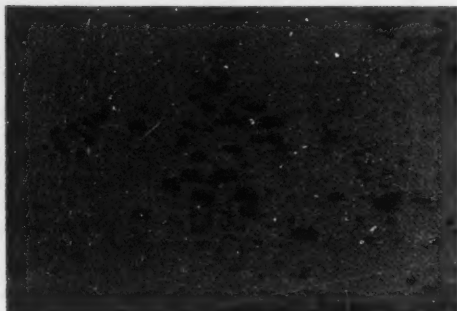
TEAM SPIRIT

In Exercises REFORGER 81 and CRESTED CAP 81, nearly 20,000 soldiers and airmen and 27,000 tons of equipment were sent from the US to Europe, where they joined 30,000 European counterparts in a demonstration of wartime reinforcement. REFORGER 81, the thirteenth in the series, was a strategic mobility exercise designed to test and evaluate plans, capabilities, and support agreements between military and civilian transportation agencies in both the US and Europe. REFORGER also tested the ability of Europe-based units to link the reinforcing units up quickly with their deployed or pre-positioned equipment. In CRESTED CAP 81, the Air Force tested plans, agreements, and procedures for rapidly receiving and employing dual-based tactical fighter units in Germany. After arriving in Europe, both the REFORGER and CRESTED CAP units participated in the annual NATO series of ground and air exercises, AUTUMN FORGE.



REFORGER

BRIGHT STAR 82, conducted in Southwest Asia in November and December 1981, continued the testing of the RDJTF in an exercise involving five countries (US, Egypt, Somalia, Sudan, and Oman) (Map A-1). The purpose of BRIGHT STAR 82 was to exercise RDJTF headquarters command and control of a deployed joint task force, provide an interface between senior US and host nation officials, familiarize the RDJTF with environmental and operational characteristics of the region, evaluate logistics and communications concepts, and provide a highly visible display of US resolve and ability to protect vital interests in Southwest Asia.



BRIGHT STAR

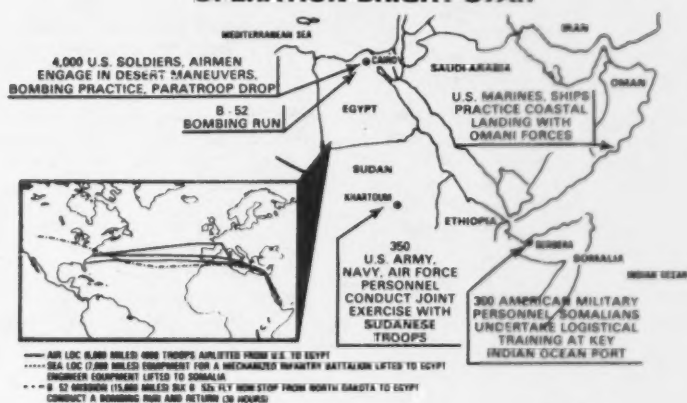
In addition to joint and combined exercises, FUELEX-81, a politico-military simulation designed to test the US Government's ability to identify and resolve defense fuel needs in an energy crisis short of war, was conducted during November 1981. The simulated crisis, which posed a crude oil interruption of some 2.3 million barrels a day to the US, was addressed by senior level players from interested government agencies in Washington, industry, and the academic community. While the current approach of allowing the free market to react to a shortfall with minimum government intervention was reaffirmed, the need for a better organization to handle the energy security problem on a government-wide basis was recognized.

Twenty-one JCS-directed and 45 JCS-coordinated exercises are scheduled for FY 1982. These exercises will complement the FY 1981 program, increase emphasis on the RDJTF, build upon Service training, and support military strategy and national policy for FY 1982.

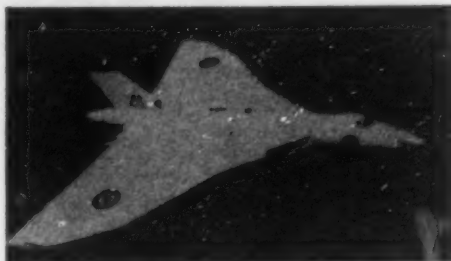
ALLIED FORCE CONTRIBUTIONS

Wherever possible, the US combines its military resources with those of its friends and allies to take collective action to defend mutual interests. US allies, particularly those in NATO, contribute significant forces, bases, and host nation support for the defense of the free world.

OPERATION BRIGHT STAR



The United Kingdom and France are the only allies possessing strategic nuclear weapons. The British possess strategic bombers and SSBNs; France possesses its own TRIAD consisting of intermediate-range ballistic missiles (IRBMs), strategic bombers, and SSBNs. While French strategic forces remain under national control, British nuclear forces are committed to NATO.



VULCAN BOMBER

The NATO allies contribute approximately 1,600,000 active duty ground force personnel. In addition, there are approximately 2,100,000 reserve force personnel. These figures do not include French forces, which consist of 325,000 active ground troops and 215,000 reserves. Within Allied Command Europe, the forces in the Central Region are of the highest quality. The Northern Region has the smallest troop density and is most dependent on mobilization and outside assistance. The Southern Region has a large troop density, but its forces field large amounts of obsolete equipment. Improvements are needed by the Allies in the areas of air defense; protection against nuclear, biological, and chemical weapons; and electronic warfare capabilities.

Non-US NATO navies are generally not designed to project offensive power, but play an important role in ASW and mine countermeasure operations. Non-US NATO navies contribute over 500 naval principal combatants, patrol, mine, and amphibious warfare ships. While overall numbers of principal surface combatants, attack submarines, and amphibious ships have remained fairly constant, total numbers of hulls and total fleet tonnage are decreasing. Technological improvements will offset the numerical decline in some cases, but not all.

NATO's European members contribute approximately 3,000 tactical aircraft to the Alliance. This contribution is being improved qualitatively as many NATO members acquire new aircraft and weapons systems. The European F-16 and TORNADO aircraft programs have shown that the European members of NATO are willing and capable of improving their capabilities

through cooperation. Consortium efforts have reduced production and development costs, allowing member countries to acquire modern aircraft in an era of rapidly escalating weapons costs.

NATO's overall capabilities are improving as a result of equipment modernization; however, there is still a need for member countries to procure the sophisticated weapons required to counter improved Warsaw Pact aircraft. Many of NATO's interceptor aircraft are not capable of operating in bad weather conditions owing to the lack of air intercept radar and radar-guided missiles. There is also an unfilled requirement to procure those systems necessary to operate in a dense electronic warfare environment.

On the other side of the world, Australia and New Zealand, although possessing small armed forces, contribute significantly to US objectives in East Asia and the Pacific. Their contributions are direct, through commitments to the Five Power Defense Arrangement (FPDA) and ANZUS Alliance, and indirect, through political, economic, and defense cooperation with ASEAN and the Pacific Island states. Under the aegis of the FPDA, two Australian tactical fighter squadrons are stationed in Malaysia and New Zealand's only fully operational combat battalion is deployed to Singapore. Withdrawal of both groups is planned for the late 1980s. This withdrawal does not indicate decreased commitment, and will be balanced by increased multinational exercises involving air, ground, and naval forces. In response to the Soviet invasion of Afghanistan, Australia has taken several military initiatives under the auspices of the ANZUS Alliance. Australia has increased its Air Force maritime patrols and Navy Indian Ocean deployments; offered to increase US Navy use of Australian facilities, including consideration of USN homeport facilities in Perth, Australia; and agreed to overflights and stop-over privileges for US Air Force B-52s conducting Indian Ocean surveillance missions. Australia and New Zealand contribute significant amounts of defense cooperation and economic aid to other nations in the region. This aid provides a valuable avenue for influence among nonaligned nations and serves as an alternative to Soviet/East Bloc support. Australia and New Zealand possess the best capability for assisting US power projection into the Pacific Islands in response to crises there.

The Japanese Self-Defense Force (JSDF) is regarded as a strictly defensive force and is not permitted to develop or maintain strategic offensive weapons such as long-or medium-range ballistic missiles, attack carriers, or long-range bombers. Japan also adheres to three principles with respect to nuclear weapons: not to possess them, manufacture them, or allow their entry into the country.

The Republic of Korea is allied with the United States under the 1954 Mutual Defense Treaty, which declares that an attack on the ROK would constitute a danger to US peace and safety. A ROK/US Combined Forces Command (CFC) was established in 1978. The Commander in Chief, UN Command, is the Commander in Chief of the CFC (CINCCFC); the CFC staff is composed of approximately 50 percent US and 50 percent ROK personnel. During peacetime, the CINCCFC exercises operational control over designated combat forces through component commanders.

While the strength of the ROK Army declined during the past decade, firepower, mobility, and communications have improved. Firepower has been upgraded through the acquisition of upgraded tanks, M-16 rifles, field-artillery pieces, antitank guided missiles, anti-aircraft guns and missiles, and HONEST JOHN rocket launchers. As a result of a reduction in the combat-to-support ratio, the number of field artillery battalions has nearly doubled. Mobility has gradually improved, with increases in wheeled and tracked vehicles. Communications have improved significantly as the result of emphasis within security assistance programs and ROK domestic production of some military radios.

The ROK Navy has gradually increased its inventory over the last 5 years. Coastal patrol capabilities have



REPUBLIC OF KOREA AIRBORNE TROOPS

been upgraded by the acquisition of patrol boats from the US and indigenous construction. Planned improvements will correct many present deficiencies, but the ROKN will continue to be plagued by aging ships and equipment.

The ROK Air Force's overall air defense and ground attack capabilities have improved steadily since the inception of a modernization program in 1971. Introduction of F-4Ds in 1970 and of F-5Es beginning in 1975 has resulted in an increasingly sophisticated fighter force.

APPENDIX B: OTHER MAJOR FORCES AND ISSUES

INTRODUCTION

The primary purpose of this appendix is to provide additional details on the military forces of the Soviet Union, the major threat to US security interests. This appendix also provides an expanded discussion of Cuban military capabilities and activities, international terrorism, and Chinese armed forces.

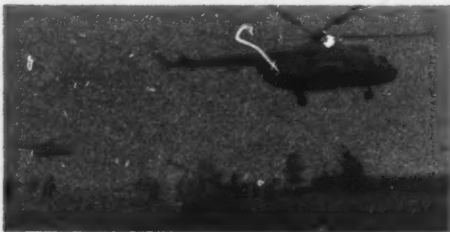
SOVIET UNION

Important Soviet Military Concepts

Combined Arms Warfare

The Soviet concept of combined arms operations involves more than the joint use of weapon systems and forces. It is meant to insure that all required systems and forces are brought to bear in a unified, effective manner at Front, theater, and national levels of command. The concept, particularly at Front or theater levels, is broader and more structured organizationally than the Western concept, which envisions joint and cooperative employment of ground, air, and naval forces to achieve an objective.

The Front is the largest field formation in wartime. It is a tactical and administrative unit the size and composition of which may vary, depending upon the situation. A Front could be composed of three to five combined arms armies and one or two tank armies, as well as aviation, airborne, air assault, naval formations, and other combat and support forces. Combined power is



AIRBORNE TROOPS IN TRAINING

applied in accordance with a fully integrated plan. To insure control, the Front commander is responsible for carrying out missions approved by the General Staff. He is responsible for overseeing and coordinating the operations of his units and those of other Services subordinated to his command.

One Front or as many as five may exist in a Theater of Military Operations (TVD). The High Command of

Forces in a TVD is commanded by at least a three star general directly responsible to the Soviet General Staff. The commander is supported by a combined arms staff with the responsibility for overseeing and coordinating activities of the various strategic formations.

At the national level, the General Staff controls the operations of the five Services. The individual Service chiefs are responsible in peacetime for the training and support of troops, development of tactics, and acquisition of weapon systems. In wartime, the same responsibilities would apply, but the General Staff would act as executive agent of the national leadership and adopt plans for control of the forces. Thus, the Soviets have structured their forces to form a unified command under the General Staff. This highly controlled command arrangement allows them to apply all elements of their military power when needed.

Projection of Power

The Soviets view the projection of power as the application of foreign policy in a much more comprehensive way than commonly understood in the West. The occupation of Afghanistan stands out as a clear demonstration of Soviet power projection in peripheral areas. Beyond this, approximately 12,000 Soviet military personnel are stationed in 24 countries (excluding Afghanistan, Cuba, Laos, and Vietnam), where they play a central role in organizing, training, and penetrating the clients' armed forces. In the first instance, Soviet power projection involves the capability and willingness to deploy operational military forces beyond Soviet borders. More



BMD IN AFGHANISTAN

importantly, Soviet power projection also allows development of surrogates and friendly governments. Subversive operations of Cuban and Nicaraguan insurgents in Central America pose new challenges for Western nations. About 35,000 Cuban military personnel, some 20 percent of Cuba's regular forces, are stationed as Soviet proxies in nearly 20 countries.

The Soviets project power through other integrated elements: traditional state-to-state activities; military aid; treaties and legal ties; support for terrorists and pro-

Soviet guerrilla groups; military sales and economic aid; cultural, media, and educational diplomacy; Committee for State Security of the USSR (KGB) and Soviet General Staff Intelligence Unit (GRU) operations; and the use of disinformation, propaganda, and forgery. The coordinated use of these tools allows Moscow to develop an infrastructure of influence in a country, react rapidly to changing situations, and penetrate areas normally beyond the reach of military forces.

The Soviets also reap advantages from other nations whose interests coincide with Moscow's. The Soviet Union has signed twelve treaties of friendship and cooperation since 1971, ten of which remain in force. Signatories of these treaties have received substantial Soviet military and economic assistance. Several East European countries have extended the Soviet Bloc's influence by signing similar accords with Angola, Ethiopia, Mozambique, and South Yemen.

Strategic Offensive Nuclear Forces

For the past two decades, the Soviet Union has devoted substantial resources to the development and deployment of ICBM and SLBM forces, and to a lesser extent, deployment of an intercontinental bomber force. As a result of these efforts, the Soviet Union has moved from a position of relative inferiority in the strategic nuclear field to a position of equivalence, or superiority, in many weapon systems.

Intercontinental Ballistic Missiles

The Soviet Union has nearly completed the deployment of fourth generation ICBMs (SS-17, SS-18, SS-19) (Chart B-1, Map B-1), with approximately half of the 1,398 deployed launchers now containing new missiles. New missile silos are considerably harder than earlier versions, and thus potentially less vulnerable. The re-

SOVIET ICBM FORCE

SYSTEM	INVENTORY
SS - 11	580
SS - 13	80
SS - 17	150
SS - 18	308
SS - 19	300
	<u>1,398</u>

AS OF 1 JANUARY 1982

CHART B - 1

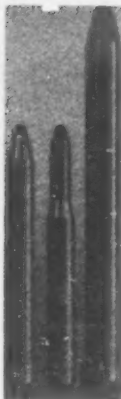
mainder of the force consists of older generation SS-11s and SS-13s. Most of the RVs are on the fourth generation ICBMs, of which certain versions of the SS-18 and SS-19 have significantly improved accuracies. Also, the Soviets are apparently ready to begin flight testing of two new solid propellant ICBMs; either or both could reach IOC by the mid-1980s.

SOVIET ICBM DEPLOYMENT



AS OF 1 JANUARY 1982

MAP B - 1



DRAWING OF SS-19/17/18

Conversion of all SS-9 launchers to the SS-18 configuration has been completed.

The retrofit of SALT II-accountable MIRVed launcher silos associated with the SS-19 is underway. The program to convert silos from SS-11 to SS-19 Mod 3 configuration will probably require several years to complete. There were little or no changes in the deployment of the SS-13 and SS-17. The majority of the 150 SS-17 launchers contain the four-RV MIRVed missiles.

According to accumulating evidence, the Strategic Rocket Forces may have plans to reconstitute and reload at least a portion of their silo-based ICBMs during a protracted nuclear conflict. Contingency plans for reloading and refiring of silos probably have been developed. The cold-launched SS-17 and SS-18 are well suited for refiring. Additional evidence supports the hypothesis that the hot-launch systems also have a reload and refire capability.

Submarine-Launched Ballistic Missiles

The Soviet Union has 70 modern SSBNs with 950 SLBM launchers. Of these, 62 SSBNs were accountable under SALT II. YANKEE-class SSBNs are routinely on station in the western Atlantic, or in transit; overlap may raise the number of units on patrol temporarily. DELTA-class SSBNs are normally on patrol in the Greenland, Norwegian, and Barents Seas.

The Soviets normally maintain YANKEEs in the eastern Pacific patrol area, with an additional unit in transit. DELTA I/III SSBNs are routinely on patrol in the Pacific. Both the SS-N-8, carried on DELTA I/II SSBNs, and the SS-N-18, carried on the DELTA III, can strike targets in



DELTA SUB

the United States from adjacent Soviet waters or even home ports. Readiness of the Soviet SSBN force is assessed as high.

The TYPHOON, latest class of Soviet SSBNs, commenced sea trials in 1981. The SS-NX-20 missile, which is to be carried by the TYPHOON, has been test fired. The TYPHOON will likely soon finish sea trials, but the complete weapon system probably will not be operational until the mid-1980s.

Soviet Air Force Strategic Bombers

The strategic bomber force consists of over 880 aircraft (Chart B-2). Bombers form the core of the force for strategic air operations in the European and Asian theaters. Three-fourths of the bombers remain poised

SOVIET AIR FORCE BOMBER INVENTORY

BEAR	100
BISON	75
BACKFIRE	70+
BADGER/BLINDER	600
	200+

AS OF 1 JANUARY 1982

CHART B 2

opposite NATO, while the remainder are located along the Chinese border.

BADGER, BLINDER, and BACKFIRE aircraft assigned to the Soviet Air Force strategic bomber force would carry out missions primarily against Europe and Asia.



BLINDER

BEAR and BISON bombers could perform theater roles as well, but are primarily reserved for strategic maritime



BACKFIRE



BEAR

or intercontinental missions. Age is a major limiting factor in the theater bomber force. About 75 percent of the bombers are over 10 years old.

Evidence would indicate that the Soviets are in the process of developing a new long-range bomber and probably a strategic cruise missile carrier. Additionally, the Soviets are developing a tanker version of their IL-76/CANDID transport aircraft.

The Soviets are also working on a program to develop long-range cruise missiles.

Theater Nuclear Forces

The Soviet Union continues to expand and modernize its theater nuclear forces at a rapid pace. The Soviets view TNF assets in both strategic and tactical contexts, with some forces serving a dual function. In particular, TNF provide a layered threat to Europe, allowing concentrations of theater forces to exist independently of Soviet strategic forces. Soviet TNF doctrine stresses mobility and readiness.

Soviet and Warsaw Pact nuclear and nuclear-capable conventional force modernization programs continue. For every ground-launched missile or rocket system which existed prior to 1976, the Soviets have fielded or are in the process of deploying a replacement system with a new level of accuracy. Chart B-3 shows older Soviet theater systems on the left and replacement systems on the right.

The number of long-range TNF (longer-range INF) ballistic missile launchers has remained relatively stable over the years. The Soviets have deployed well over 260 SS-20 launchers since 1977 and deactivated over 200 SS-4 and SS-5 launchers.

In 1981, the Soviets initiated construction of additional new SS-20 bases, from which missiles are capable of striking NATO Europe. The remaining SS-20 deployments likely will be located in the western Soviet Union. The number of launchers probably will be less than SS-4 and SS-5 levels, but the number of RVs will be considerably greater because of the three-MIRV payloads (Chart B-4). If one refire is allocated each missile, the number of IRBM RVs have more than doubled between 1977 and 1982.

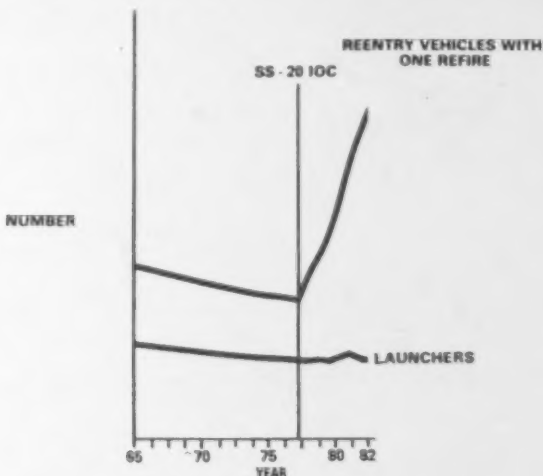
The wider deployment pattern of the SS-20 and its increased range capability over the SS-4 and SS-5 have

MAJOR SOVIET THEATER MISSILES AND ROCKETS

SYSTEM	RANGE	REPLACEMENT SYSTEM	RANGE
SS-4	2000KM	SS-20	5000KM
SS-5	4100KM		
FROG	70KM	SS-21	120KM
SCUD B	300KM	SS-23	500KM
SS-12	900KM	SS-22	900KM

CHART B - 3

SOVIET LONG-RANGE TNF (LONGER-RANGE INF) BALLISTIC MISSILE WARHEADS 1965-1982



NOTE: THE SYSTEMS INCLUDED IN THIS CHART INCLUDE THE SS-4, SS-5 AND THE SS-20. THE TOTAL NUMBER OF LAUNCHERS HAS REMAINED CONSTANT WITH THE INTRODUCTION OF THE SS-20 DUE TO A DRAW DOWN IN THE NUMBERS OF SS-4s AND SS-5s.

AS OF 1 JANUARY 1982

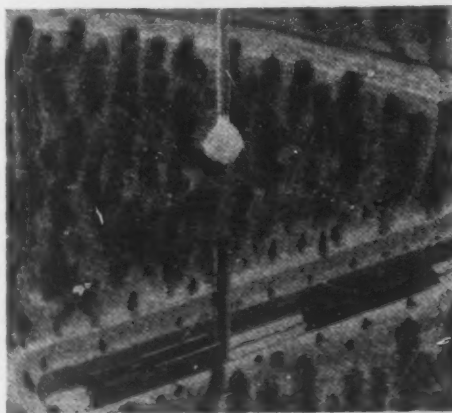
CHART B-4

enabled the Soviets to extend their LRTNF capability to the Middle East, Southwest Asia, and East Asia.

The growth in the number of Soviet short-range ballistic missile launchers and free-rockets-over-ground (FROGs) has also continued. There is currently no indication that the Soviets will draw down these older systems to counterbalance the introduction of newer systems.

Strategic Defensive Forces

The Soviets have deployed the most extensive strategic air defense system in the world. This force poses a significant threat to penetrators of Soviet air space. Modification of existing systems, along with the development and deployment of new weapons, assure that the force capability will continue to improve.



SS-20

Radar Surveillance and Detection

The Soviet air defense network has good detection and tracking capabilities under all-weather conditions against aircraft at medium-to-high altitudes. Radars with improved low altitude acquisition capabilities are not yet fully operational.

A major improvement in Soviet detection and tracking capability is expected from the deployment of an Airborne Warning and Control System. The system will extend detection over land and water and improve interceptor control capabilities.

Surface-to-Air Missiles

The Soviets have about 10,000 SAM strategic launchers deployed at about 1,000 sites. The SA-1 system continues to provide primary air defense for Moscow from sites deployed in two rings around the city. Throughout the Soviet Union, the long-term drawdown of the SA-2 may resume due to replacement with the more capable SA-10. Meanwhile, SA-5 deployment has increased slightly, and the SA-3 force continues to convert from the two-rail to the four-rail launcher. Over half of the SA-3 sites now have four-rail launchers. Tactical SAMs, with better low altitude capabilities, would be expected to augment strategic defenses.

Interceptors

Modernization of Soviet air defense aviation continues with the first operational deployment of the Modified MiG-25/FOXBAT and new deployments of the MiG-23/FLOGGER and MiG-25/FOXBAT. Older model



FLOGGER

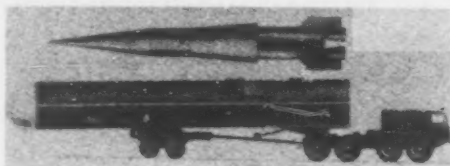


FOXBAT

SU-9/FISHPOT, MiG-17/FRESCO, and MiG-19/FARMER interceptors have been phased out of the active inventory. The Soviets have resumed modernizing regiments equipped with the YAK-28/FIREBAR.

Ballistic Missile Defense

The program for upgrading ballistic missile defenses in the Moscow area continues. These defenses once consisted of four antiballistic missile (ABM) complexes with 64 ABM-1b/GALOSH above-ground launchers, but in late 1979, 32 of the launchers were dismantled. The Soviets could build to the 100 ABM launcher limit allowed by the 1972 ABM Treaty.



ANTI-BALLISTIC MISSILE

A new large phased-array radar is being constructed near Moscow. This radar probably will serve in a battle management role for the upgraded Moscow system, augmenting or possibly replacing existing DOG HOUSE and CAT HOUSE systems.

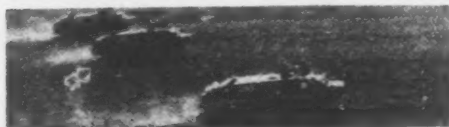
Other ballistic missile defense system components include the TRY ADD engagement radars at the Moscow complexes, peripherally located HEN HOUSE early warning radars, and new large phased-array early warning radars which are not yet fully operational. Phased array radars are superior to the HEN HOUSE network and probably are designed to close existing gaps in coverage.

General Purpose Forces

Ground Forces

The Soviet Union maintains the world's most powerful ground force, totaling some 1.85 million personnel. Major formations include combined arms and tank armies, 10 corps, and over 180 active maneuver divisions. Some 30 divisions have been added since 1967.

The Soviets have developed and are now fielding new families of compatible and complementary weapons in all areas of their ground forces. A divisional reorganiza-



ARMORED PERSONNEL CARRIERS

tion program, which is now being implemented on a force-wide basis, provides a better balance of arms, es-

pecially in tank divisions. These developments provide the equipment and organization necessary for the type of combined arms combat the Soviets envision in a future war.

The Soviet Union still places primary emphasis on the tank. Deployment of the latest model main battle tanks, the T-64 and T-72, is continuing; these tanks now number approximately 10,000 or 20 percent of the active inventory. The follow-on tank, the T-80, which incorpo-



T-72

rates major advances in armor protection, mobility, and fire control, will be deployed to troop units in the near future.

A major expansion has occurred in ground support helicopter capabilities, based in large part on experience gained in Afghanistan. New units have been formed and existing units expanded. New models of helicopters include the HIND D/E, one of the world's most heavily armed ground attack helicopters.

The Soviet Union maintains the world's largest airborne force, currently seven divisions. The number of airborne amphibious combat vehicles (BMDs) in most of these divisions has increased. The operational characteristics and armament of the BMDs give the Soviet airborne forces an unprecedented capability for firepower and mobility compared to airborne forces of other nations, as well as the capability to conduct limited operations as mechanized formations. The Soviet Union continues to believe that large scale airborne operations are feasible and are best served by combining parachute and air-landing techniques.

The Soviet Union has formed a number of air assault brigades since 1979 at key locations in the Soviet Union, East Europe, and Afghanistan. These units, assessed to be Front or possible army level assets for special assault roles, can be either parachuted or air-landed on an objective.

A new 152mm artillery system was deployed in 1981. A towed gun is replacing older 130mm guns in some artillery units. Artillery battalions continue to be introduced into tank regiments, and self-propelled



152MM SELF-PROPELLED ARTILLERY

howitzers are beginning to replace towed versions in some regiments in East Germany.

Over 85 Soviet divisions are oriented against NATO. Twenty-five tank and motorized rifle divisions, including several in Afghanistan, are oriented toward Southwest/



ARMORED PERSONNEL CARRIER

South Asia; while over 45 are located in the Far East, the majority are oriented toward the Sino-Soviet border. The remaining tank, motorized rifle, and airborne divisions are considered a strategic reserve force. The non-Soviet Warsaw Pact has 53 divisions.

Air Forces

Soviet tactical air forces contain about 4,800 fixed-wing combat aircraft, excluding a significant number of combat trainers. A large percentage are located in East Germany, Poland, Czechoslovakia, and Hungary.

Continued deployment of FENCER and the new deployment of other ground support aircraft will significantly improve ground attack/interdiction capabilities.

Naval Forces

Operational forces are organized and distributed into four distinct fleets (Northern, Baltic, Black Sea, and Pacific) and the Caspian Sea Flotilla. Only the Northern and Pacific Fleets have direct access to the open ocean. It is to these two fleets that the Soviet Navy has allocated the majority of its general purpose submarine



FORGERS

force, including its nuclear-powered submarines and long-range reconnaissance and ASW aircraft.

By contrast, the Baltic and Black Sea Fleets are nearly landlocked, with access to both seas controlled by non-communist nations. While the primary tasks of these fleets include support of army operations on the flanks, some fleet forces, especially naval air bombers, have primary tasks beyond the flanks in the North and Mediterranean Seas.



SOVREMENYY

The Soviet Navy maintains a Mediterranean force averaging eight surface combatants, about 30 supporting auxiliaries, and a number of submarines. These units operate from and are supported by auxiliaries at anchorages in international waters. Additionally, repair facilities for Soviet naval units are available in Yugoslavia and Tunisia. Soviet repair ships provide limited support in Syria and Tunisia.

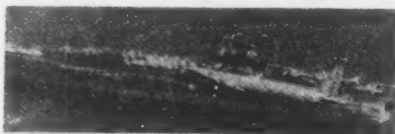
The Soviet Navy maintains a continuous presence in the Indian Ocean with a varying force level. Naval activity is concentrated in the southern Red Sea near the available repair facility at Dahalek Island; in the Gulf of Aden between the port of Aden, South Yemen, and anchorages near Socotra Island; and in the Arabian Sea, where units are deployed to monitor Western naval forces. The current force level, which includes four to six surface combatants, 20-25 auxiliaries and a number of submarines, is 15 percent below the highest level of 1980.

Since early 1979 the Pacific Fleet has conducted periodic deployments of surface combatants, auxiliaries,



KIEV

and frequently submarines in the South China Sea. These units, supported by facilities at Cam Ranh Bay and Da Nang, Vietnam, are well located to monitor US forces operating in or transiting the area. Soviet Naval Aviation (SNA) deploys maritime reconnaissance and ASW aircraft at Cam Ranh Bay and Aden, and also at Asmara, Ethiopia. Long-range reconnaissance aircraft also are deployed periodically to Cuba and Angola. In mid-1981 SNA deployed BADGER reconnaissance aircraft and MAY ASW aircraft to Syria for a joint naval exercise. These were the first SNA operational aircraft



MAY

to be deployed on the Mediterranean littoral since the Soviets were expelled from Egypt in 1972. Two MAY aircraft also deployed to a former US airfield at Tripoli, Libya, for operations over the Mediterranean Sea.

The Soviet Navy continues to rely heavily on missile systems for standoff antiship attack and fleet air defense. The long-range cruise missile deployed on the KIROV-class guided missile cruiser and OSCAR-class SSGN is intended for antiship attack. A naval version of the SA-10, is also carried by the KIROV. This long-range missile is the first Soviet naval SAM to offer a simultaneous, multiple target tracking and engagement capability.

Special Capabilities

Electronic Warfare

Electronic warfare is part of established Soviet military doctrine which the West has labeled radio electronic combat. Soviet REC is aimed at systematically disrupting vital enemy electronic control at critical times through the integrated use of firepower, jamming, and deception. The Soviets intend to attack targets based on the degree of threat each poses to Soviet forces.

The Soviets continue to improve their capability to implement this doctrine through investments in equipment and training. Technological advancements have been made in ECM equipment and electronic support measures used by air, ground, and naval forces.

The Soviets dedicate numerous aircraft to EW as ground support or escort and standoff jammer platforms. Since 1979 the Soviets have increased their emphasis on offensive, penetrating air forces equipped with ECM and accompanied by aircraft dedicated to jamming. They have made a massive investment in electronic counter-countermeasures, as well as lethal and nonlethal countermeasures. The Soviet Navy is the world's best equipped in the field of EW and supports a worldwide SIGINT collection program. Ground forces continue to introduce new jammers and a new series of improved SIGINT vehicles. Fixed jammers are located strategically throughout the Soviet Union.

Chemical Warfare

The Armed Forces of the Soviet Union (and the Warsaw Pact in general) are better equipped, organized, and trained than any other military forces in the world to conduct chemical warfare operations. Soviet doctrine



TROOPS OUTFITTED FOR CW OPERATIONS

calls for the use of toxic CW agents in both offensive and defensive situations. Chemical weapons are to be used in close coordination with high explosive and nuclear strikes, and may be used independently when their special effects can provide a tactical advantage.

Warsaw Pact nations have an extensive and well developed chemical processing industry. CW materiel is stockpiled in major depots throughout the Warsaw Pact area. Research underway in CW includes development of agents, delivery system evaluation, and technology to improve CW effectiveness.

For the last five years the Soviet Union has used chemical warfare agents, either directly or through surrogates, in Southwest Asia and Southeast Asia. In Afghanistan Soviet forces and Afghan forces loyal to the Soviet-backed regime are believed to have made chemical attacks using riot control agents. In addition, an incapacitant that induces short periods of unconsciousness with no apparent aftereffect and lethal chemical agents have been reportedly used there. In Laos and Kampuchea, the use of riot control agents and possibly lethal chemicals has been reported. Lethal mycotoxins have been used in Kampuchea by forces who are clearly supported by the Soviets.

The Soviets emphasize unit as well as individual NBC protective training; division-size units have their own training areas. The objective is to prepare personnel psychologically and cause them to experience some stress while learning the technical skills needed to operate in NBC environments. Up-to-date instruction materials are widely available and defensive training is comprehensive and realistic. The occasional use of live lethal chemicals adds realism and confirms a high standard of preparedness. The Soviets also conduct training for handling mass casualties.

Warsaw Pact troops have a variety of equipment designed to provide NBC protection. Individual items are adequate to provide protection from contamination for hours, days, or longer, depending on the nature and concentration of the contaminant. Antidotes are available to protect personnel against the effects of their own agents as well as those of NATO. The continued deployment of combat and support vehicles with collective chemical, biological, radiological (CBR) protection systems reflects Soviet concern for maintaining combat effectiveness in a toxic environment.

Space Systems

The Soviet Union operates space satellite systems which support photo reconnaissance, ELINT reconnaissance, ocean reconnaissance, antisatellite functions,

missile launch detection, communications, meteorology, and navigation.

The Soviets have an operational antisatellite system deployed. The system has the potential to destroy satellites in high orbits. The Soviet Union has no operational space-based weapon systems.

Mobilization

The Soviet Union has created a mobilization system which integrates government agencies, the economic sector, the general population, and transportation systems. While geared for a rapid buildup and wartime commitment of military units and other resources to achieve a quick victory, the system is designed to accommodate extended and selective mobilization of all types of military and civilian resources.

Manpower policies require universal military service, which consists of active and reserve duty. Virtually all physically and mentally fit males between the ages of 18 and 50 are either on active duty or subject to reserve service. As a consequence, the Soviet Union has established a reserve pool numbering in the tens of millions. More than eight million men have been discharged within the last five years, a number which substantially exceeds requirements to fill understrength active units and meet other known expansion plans (Chart B-5). The mo-

PERSONNEL DISCHARGED FROM SOVIET MILITARY, 1976 - 1981

FUNCTIONAL GROUPING	PERSONNEL
COMMAND AND GENERAL SUPPORT	2,702,000
GROUND FORCES	3,210,000
GENERAL PURPOSE NAVAL FORCES	446,000
AIR FORCES	567,000
STRATEGIC ATTACK FORCES	549,000
STRATEGIC DEFENSE FORCES	914,000
	13,388,000

AS OF 1 JANUARY 1982

CHART B-5

bilization system can provide manpower and materiel to the military on a regional or local basis, or in the context of a general, country-wide mobilization.

The Soviet Union has established sizeable stockpiles of consumable supplies and war reserve equipment. The top priority supply items are ammunition and POL. Large dispersed stocks of these two items are maintained in depots and facilities under the control of tactical units, operational commands, military districts, groups

of forces, and Ministry of Defense. There are also plans to use civilian POL facilities to support military operations.

Major end items are designated principally as mobilization or strategic reserves. The former comprise materiel stocks intended to create new units or to serve as replacements. Strategic reserves consist of materiel stockpiles (or military contingents) under the control of the Ministry of Defense or Supreme High Command for use as supplementary resources. All Soviet force com-



IL-76/CANDID HEAVY TRANSPORT

ponents maintain materiel designated as war reserves. The most substantial reserves have been identified in the ground forces. In addition, there are identified mobilization equipment bases which contain sets of equipment suitable for division-size units; these assets represent a principal means of creating new divisions, but also could be used as replacement items.

Soviet doctrine calls for the maintenance of materiel reserves in quantities sufficient to support military operations until industry can increase production to levels adequate to sustain the armed forces. The extensive military materiel stockpiling effort is clearly aimed at this goal. The use of stocks from the strategic reserve and use of civilian POL would sustain operations longer. Substantial numbers of recently discharged reservists would be available to create new units or serve as replacements. The military manpower base greatly exceeds force expansion requirements.

Special Operations Forces

The Soviets maintain numerous special purpose forces for a variety of sensitive missions in both peace and war. These forces include KGB special security troops, Ministry of Internal Affairs Troops, Internal Troops, KGB sabotage teams, select Guards Airborne units under KGB control for contingency missions, and GRU special purpose troops (SPETSNAZ) organized in brigades and attached to military districts, groups of forces, and fleets. All these forces are capable of deploying outside the Soviet Union, although the principal

sabotage and direct action threat to NATO and CONUS is posed by KGB and GRU special purpose forces.

In wartime, KGB sabotage teams and GRU special purpose troops are intended to operate at great depth behind enemy lines, independent of regular forces, and conduct actions against key political, military, and economic targets.

The KGB is assessed to have responsibility for operational planning, coordination, and political control of all special purpose forces operating abroad in peacetime. Wartime missions of GRU special purpose troops are planned under the direction of the General Staff.

GRU special purpose troops are capable of operating in any theater of military operations. These forces are intended to support Front or fleet operations.

Soviet employment of special purpose forces in the period immediately preceding and during Warsaw Pact hostilities against NATO will not by itself prove decisive to the outcome of a theater war or larger conflict. However, these forces can seriously cripple or forestall an effective NATO military response and greatly contribute to the success of a Warsaw Pact theater offensive.

CUBA

Cuba provides a unique threat to US interests in the Western Hemisphere because of its close ties with the Soviet Union and aggressive foreign policy. Cuba has the independent capability to project limited, but significant, military power in the Caribbean region. Havana has the capability of interdicting nearby sea and air LOCs. Additionally, over 12,000 Soviet personnel are stationed on the island, including the Soviet "brigade."

Support of Revolution

Cuba has been active in exporting revolution for the past two decades; in all, the Castro regime has been involved with insurgents in at least 13 Latin American countries (five in Central America, four in the Caribbean, and four in South America). However, Cuban strategy has changed since the removal of President Somoza in Nicaragua in 1979. A new approach calling for uniting leftist groups in the region, training and equipping insurgents, and taking aim at existing governments is being orchestrated by Cuba, with the advice and support of the Soviet Union.

Havana has focused its aid on Nicaragua as well as increased its support to revolutionaries elsewhere in the hemisphere, including El Salvador, Guatemala, Honduras, and Colombia. In the last few years, Cuba has trained more than 2,000 Latin American insurgents.



OSA-1 BOAT

Cuba and the Soviet Union have provided ammunition, equipment training, limited funding, and advice to the insurgents.

Conventional Forces

Cuba has the highest percentage of population in the military of any Latin American country; it can mobilize almost one million people out of a total population of just under ten million. The Cuban military has an active duty strength of about 130,000 personnel, plus about 100,000 ready reservists who can be mobilized on short notice. Cuba has secondary reservists who can be mobilized, less well-trained Territorial Militia, and personnel in the Civil Defense who would come under the military in wartime.

Combat experience in Africa, intensive training at home, and the large volume of equipment deliveries from the Soviet Union have contributed to improved combat capabilities during the past few years. Elite special force units, the Ministry of Interior Special Troops and the Revolutionary Armed Forces Assault and Landing Brigade, could be used to project a rapid Cuban military buildup in the Caribbean Basin and therefore are potentially threatening to small countries in the region.

The Cuban Army is the second largest in Latin America. Over 34,000 Cuban Army personnel are serving overseas. During the past few years the ground forces have undergone a reorganization which has placed great importance on mechanization and improved Cuba's ability to activate reservists for active duty.

The Cuban Air and Air Defense Force is primarily defense oriented, but has the capability to have a major impact in the Caribbean region. Approximately 200 MiGs are the backbone of this force. If Cuban fighters were to stage out of Central American or Caribbean airfields and those in Cuba, they could strike all of Central America, the Caribbean islands, parts of the southeastern US, and oil fields located in Mexico (Vera Cruz) and Venezuela. Cuba lacks long-range aircraft, but

its commercial airline provides excellent support for troop movement overseas. While considered short



MIG-23

range, Cuba's AN-26 transports could airdrop troops in Central America and in the western Caribbean islands. Some 2,000 air and air defense personnel are serving in Africa.

The Cuban Navy has recently acquired the ships needed to project force in a limited way beyond its traditional areas of coastal defense. Two FOXTROT-class submarines and one KONI-class frigate allow the Cubans to operate in the Caribbean, Gulf of Mexico, and North Atlantic.

INTERNATIONAL TERRORISM

The increase in international terrorism the past 10 to 15 years reflects the efficacy of terrorism as a method of achieving political goals. Whether used as the primary means, as with such groups as the Red Brigades, or as one of many tactics, terrorism is widely used today to create instability in the industrialized West and Third World nations governed by pro-Western or anti-socialist regimes. Only occasionally is terrorism a problem in the Soviet Union and Eastern Europe; thus it must be seen as a threat mainly affecting the West and its sources of raw materials.

Terrorism can be viewed as an act undertaken by an individual or group whose cause is relatively well defined, or as a part of a larger international network with international backing. International terrorism affects national, regional, and even global affairs, and gives rise to increasing concern for the future. While the usual terrorist methods, such as hijacking, kidnapping, assassination, and bombing, are expected to continue, attacks against nuclear power or weapons storage facilities become more likely as the technology and training available to terrorists improves. Further, the possibility of terrorist acquisition and use of chemical weapons or materials, even in very crude form, should be given serious consideration.

Soviet Involvement

While international terrorism is not confined to a particular country or region, it is evident that much support for this cause comes from the Soviet Union. Terrorism has been a central element of Soviet domestic control and support for external revolution since the earliest days of the Bolshevik movement. As a frequent component of armed subversion or national liberation, terrorism has become increasingly important to the Soviet Union since the advent of nuclear weapons. Because the usefulness of terrorism would be lessened should the Soviet role become known, Soviet proxies and the clandestine assets of the KGB, GRU, and East Bloc intelligence and security services are used to allow the Soviet Union to plausibly deny involvement.

Soviet supported terrorism is tailored for the area in which it is applied. In the West, this has usually meant use of a wide variety of groups which have the basic purpose of discrediting governmental efforts to protect the populace from terrorist activities. In the Third World, Soviet objectives are broader and may include revolution. The ability of Third World governments to react to terrorism is more economically constrained and available security forces are less sophisticated. Additionally, Western governments are usually unwilling to provide assistance beyond weapons and equipment sales.

By providing covert support to terrorist groups attempting the overthrow of pro-Western or anti-socialist governments, the Soviet Union has managed to exploit efforts of politically, ethnically, and racially diverse groups and to subordinate their goals to those of Soviet foreign policy. This use of power has strengthened Soviet influence in the Third World and correspondingly threatened Western, especially US, political and economic access. In Western Europe, the social intolerance of terrorist acts has necessitated increased security force presence and activity and a consequent reduction of public freedom. These factors have been exploited by the Soviets in carefully contrived campaigns against the US presence in Europe, the NATO Alliance, and conservative European political parties and figures. Soviet support of terrorism is never haphazard, and the Soviet Union is careful to conceal its involvement in terrorism through use of proxies.

PEOPLE'S REPUBLIC OF CHINA

China continues to view the Soviet Union as the main threat to its security. About half its ground forces are arrayed in the four northern military regions bordering the Soviet Union and Mongolia. The Chinese recognize their inability to engage the Soviets successfully in com-

bat on open terrain and have thoroughly prepared for defense in favorable mountainous terrain. The effectiveness of Soviet mobility and firepower would be reduced on such terrain, while the Chinese could capitalize on their huge manpower assets to engage in close-quarter combat and night fighting.

China views its strategic missile force as an effective nuclear deterrent because its deployment strategy of mobility, hardening, and concealment poses targeting problems for any potential aggressor. This strategy enhances the survivability of some portion of the missile force for a significant retaliatory strike.

* China's leaders disavow the first use of nuclear weapons. The small size of the missile force, limitations on accuracy, inflexibility of command and control systems, and overwhelming superiority of superpower strategic and tactical nuclear forces argue against a Chinese first use of nuclear weapons.

Strategic Offensive Nuclear Forces

Most of China's deployed missiles are the CSS-1 and CSS-2 MR/IRBMs. The majority of the mobile MR/IRBM launch units will likely be dispersed to take advantage of terrain and camouflage and remain concealed during an enemy's first strike. China has deployed a limited number of limited-range CSS-3 and full-range CSS-4 ICBMs. Only the CSS-4 can reach targets throughout the US. The CSS-3 can reach targets throughout Asia, Eastern Europe, and portions of Alaska.

Strategic Defensive Forces

The strategic defensive forces consist of interceptors, surface-to-air missiles, antiaircraft artillery, and a network of radars. The force is large, but its effectiveness is limited by a lack of sophisticated equipment and vulnerability to air attack. Only a small percentage of the interceptors have an all-weather capability, and air-to-air missile deployment is limited. China's radar coverage provides good early warning against aircraft flying at medium-to-high altitudes, but is limited against low-altitude targets.

General Purpose Forces

The Army, with over four million men, is essentially a defensive, infantry-oriented force; it is supported by an armed militia of ten million men. About half of the

ground forces are assigned to main-force tactical maneuver units capable of engaging in operations anywhere in China. The remaining force is assigned to garrison, border defense, and internal defense units, which are neither equipped nor trained for major offensive operations. Major weapons and equipment deficiencies include limited antiarmor capabilities, poor tactical mobility, limited organic air defense, and poor logistical capabilities for large scale out-of-country operations.

Fighter bombers and medium-range bombers support ground forces by interdiction and ground attack. Other aircraft provide reconnaissance and airlift support. Some of the aircraft have a limited radar bombing capability. The airlift capability is hampered by the shortage of medium- and long-range transport aircraft. China's



CHINESE IL-28 BOMBERS

overall ability to conduct tactical air operations is limited by deficiencies in armament and communications.

China's naval power lies in the numerical strength of its 1,200 fighting units, including some 10X submarines deployed along the entire coastline. Land-based and seaborne naval assets are integrated into a coastal defense network. The main weakness of the naval forces is equipment obsolescence.

Force Modernization

The threat posed by the technological superiority of Soviet weapon systems will determine China's military requirements for the 1980s. Until new equipment can be introduced, the Chinese will continue to rely on the essentials of People's War, combined with plans for a tenacious position defense of vital areas.

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